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J. J. CASSIDY, M.D., EDITOR.

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The Canadian Journal of Medicine and Surgery

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Original Contributions.

INTESTINAL OBSTRUCTION WITH OR FOLLOWING DISEASE OF THE VERMIFORM APPENDIX.*

BY N. A. POWELL, M.D.

Professor of Legal Medicine and Associate Professor of Clinical Surgery, Medical Department of the University of Toronto; Assistant Surgeon, Toronto General Hospital; and Consulting Surgeon, Hospital for Sick Children.

OBSTRUCTION with or following appendix disease must be a condition of comparative rarity. The known frequency of inflammatory conditions in this organ and the enormous number of operations now being done for their relief would supply more frequent examples if such were not the case. The longest series of cases of which I have knowledge is that of McWilliams, in which 31 cases are tabulated occurring during attacks, and 86 following operations.

My personal experience supplies but two cases out of over 350 submitted to operation. The first of these can be dismissed with only a few words, since similar ones have doubtless been seen by most of those present. Under the legal rule that no man is bound to incriminate himself I might decline to supply details regarding it, but with the lodge closely tyled as this is I may say it was that of a young man with an acute attack, his operation being done at night and in a badly lighted room. The peritoneal edges in one part of the wound not having been accurately sutured, adhesion of the bowel took place, with subsequent angulation and obstruction. Prompt reopening of the wound led to its relief, the re-establishment of fecal circulation and free movement of the bowels an

*Read before the Section of Surgery at meeting of the British Medical Association, Toronto, August, 1906.

hour later. Delay under such conditions leads to disaster, but the methods for giving relief are obvious and the results contenting.

Resection of 54 inches of Gangrenous Intestine in the Treatment of Post-operative Ileus. Recovery.

R. Z., aged 17, student, consulted me on January 29, 1906, eight hours after the onset of his third attack of appendicitis. His first experience of the trouble occurred in September, 1905; it was accompanied by pain and vomiting, but under "morphine and poultices" is said to have passed off in twenty-four hours. The second attack came on two weeks later, was accompanied by vomiting and by pain, which on the second day was localized in the right iliac region. He was ill ten days and recovered gradually, but was much troubled with constipation thereafter, and had poor digestion, with loss of weight and sallow skin. In his third attack he had high temperature and pulse, pain, vomiting, and muscular rigidity when first seen, and was very ill.

He was at once sent to the hospital and operation done twenty-six hours after his initial symptoms. The appendix was infiltrated and dusky, in one place being distended and thin almost to the point of rupture. After removal it did rupture while being examined by a colleague, and a greenish, offensive pus was discharged. The progress of the patient for four days was all that we could desire; but on the fifth pain set in—at first spasmodic and general, but soon continuous—located to the left of the umbilicus, and accompanied by rigidity of the left rectus. Distension of the upper half of the abdomen followed, and vomiting was frequent. High enemata failing to afford relief, and the condition becoming hour by hour more grave, I sealed the original operation wound with collodion, and at 9 p.m. made a median section. A greatly distended coil of small intestine protruded. It was almost black, had lost its lustre, and the serous coat had given way in long lines. Withdrawing this coil, a rapid examination of the cecum showed the appendix area in perfect condition and the last two feet of ileum empty and collapsed. On the left side an old dense adhesion bound the gut down, forming an annular band. All the ileum above this for many feet was distended and its vitality clearly compromised beyond repair. Shading upwards from this distended portion the bowel was edematous and so friable as to tear with a touch. The patient's pulse at this time was 140, and bad in character, and his respirations were jerky. Grave fears that he would die upon the table were entertained by all present. Testing the circulation in the bowel by hot gauze, I reached a point where the color changed, and where pulsation, in spite of his weak condition, could be made out in the underlying mesenteric vessels. I then determined to first

empty the bowel, then to resect the damaged portion, and to end the operation by an anastomosis or by enterostomy, as the general condition might make possible. Using the tube and the technique of Moynihan, both of which seem to me about perfect, I withdrew three parts of a basinful of putrid material from the bowel, the tube being fixed in place by a purse-string suture and the bowel brought well over the side, so that there was no soiling.

It then became possible to double clamp and anastomose the

Resection of 4ft. 6in. of Gangrenous bowel.

bowel, to resect its intervening portion, tying the mesentery off in small sections near the bowel. The redundant portion of mesentery was folded upon itself, stitched together, and attached under the junction which had been made by a Murphy button. The abdomen was then filled with normal saline solution, the wound closed, and the patient kept in the Fowler position. Counting from the commencement of the anesthesia, the operation occupied fifty minutes. The rally from shock was gradual, but the patient passed the button in seven days, recovered completely, and has had no digestive disturbance since.

In this operation I had the great advantage of perfect assistance from my friend, Dr. E. E. King, from the anesthetist and from the staff, and in no surgical procedure is such aid of more importance.

May I be permitted to use this case as the text for a few comments on the technique of operation for the relief of intestinal obstruction from whatever cause arising? I have had to deal with a fairly long series of these cases, due to practically all the ordinary causes, excepting embolism of the mesenteric vessels, and have met with the varying degrees of success with which most surgeons are familiar. As a result of this experience and of the clinical impressions it has left, I have reached the conclusion that in acute intestinal obstruction the ordinary mortality of 50 per cent. may, by operation within a thirty-six hour limit, be cut down to 5 or 10 per cent.

I feel equally sure that ileus, unrelieved till after the third day, will have a mortality mounting by leaps and bounds to 75 or 90 per cent.

Preparation for Operation.

This should include a critical review by the surgeon himself of every detail of the equipment sterilized for use. Sending to the instrument room for what should have been got ready, using makeshift substitutes for the devices which facilitate rapid and accurate work, this we still see, and this we should not have to see at all. Who has not watched an operator trying to suture the thin wall of an intestine with a curved needle the eye of which is thicker than the part it penetrates; or who has escaped the sad sight of an assistant wasting the patient's chances of recovery by time-consuming efforts to arm fine needles with wet silk, heedless of the fact that a spirit lamp to char the suture ends would have enabled him to rapidly prepare what all good assistants get ready before any incision is made?

The incision, as a rule, should be median and ample, and if the cause of obstruction is not at once apparent, evisceration upon towels wrung out of hot saline solution should follow. This admits of systematic examination, and will tend to eliminate those regrettable cases where the surgeon, after finding and relieving one cause of obstruction, learns later at the autopsy that a similar condition had existed elsewhere and had been undiscovered. True, evisceration is not without risk; the weight of a distended bowel will, if it be allowed to pull upon the mesentery, notably increase shock, which in acute obstruction is always great and nearly always badly resisted. The remedy is to support the bowel and to empty it promptly and properly. It is humiliating to think how slowly we have come to recognize that the relief of obstruction to fecal onflow is but a small part of a surgeon's duty. The

putrid pools of poison above the obstruction must be, and fortunately can be, rapidly drained without increasing the risk of infection. Believing that the use and value of Moynihan's tube, by which this can best be effected, is not as fully known as it will be later, I submit samples of it and of the Paul or Mixter tubes, which should always be at hand when an operation is undertaken for the relief of ileus.

From the moment of opening the abdomen till it is closed again I like to have a stream of warm normal saline solution flowing over all exposed bowel surfaces. By this, chilling and drying are prevented and tissue vitality is conserved.

Where an anastomosis is to be made, that method with which the surgeon is most familiar is the one of choice. My personal preference is for the Connell suture, slightly modified in application, all knots being tied within the bowel. I reinforce this with a Cushing's right-angled sero-serous suture, which takes but a few moments to apply when one has learned that a fine straight needle is one-third faster than any other and can be used with far less risk of subsequent leakage.

In the cases where moments count for much I still use, as in one of the cases just cited, the Murphy button, and shall never lose my gratitude to the inventor of it, still, thank God! here with us and adding daily to the debt humanity owes to his genius and his industry.

Shall enterectomy or enterostomy be resorted to, or shall these procedures be, in any sequence, associated? The general condition of the patient more than the local damage must, I take it, determine these points. An artificial anus leading into the small intestine is to be made only when surgery more nearly ideal is out of the question.

The higher in the bowel the opening is made, the more irritating will be the discharges and the greater the probabilities of malnutrition. While the general trend is now in favor of complete operation rather than of enterostomy, this latter procedure has a field of usefulness, but the field, let it be emphasized, is not a prairie.

Where primary excision is done, a good margin of safety must be left on the proximal side. In each of seventeen cases collected by Roswell Park, over 200 cm. of bowel was removed, and there were fourteen recoveries. *Per contra*, in a large series of less extensive resections the mortality was over 30 per cent. We can go to great lengths in the removal of bowel, not too near the jejunum, but one suture taken through sodden and poisoned tissue may give way and bring disaster. The appearance of the serous covering is at times misleading. We may rest assured if it is bad the muscular coat beneath it will be worse, and the mucous

surface still more compromised. Better the sacrifice of a few inches of bowel in which repair might have taken place than the giving way of a line of anastomosis with the disaster sure to follow.

With one other point I conclude. The surgeon who knows it all and who has no need to practise intestinal operations upon the inferior animals is the last man to whom cases of obstruction of the bowel should be referred. No one has any moral right to learn intestinal surgery upon those whose lives depend on how rapidly, how gently, and how accurately the abdomen can be opened, treated, and then closed again.

THE PRESENT STATUS OF MILITARY MEDICAL ARRANGEMENTS IN CANADA.*

BY LIEUTENANT-COLONEL J. T. FOTHERINGHAM, M.D., A.M.D., CANADA.
P.M.O., Military District No. 2.

It may appear strange to you that the Section of Army, Navy and Ambulance is not arranged for at this meeting. My brief paper is an attempt to show that the subjects germane to the Section named are at least not entirely unthought of in this country, and the relative neglect of what is in all other civilized countries so important a special branch of medical science may appear more reasonable to you after hearing the figures which I briefly bring before you.

Canada has a population which, while martial enough in instincts, both in her French-speaking and in her English-speaking districts, is almost totally unmilitary. It has not been always so, as witness the struggles of the latter half of the eighteenth century, and the years 1812-15. But our population has been, and is still, so sparse, and so inadequate to the natural advantages and industrial possibilities of the country, that our time has been perforce taken up, to the practical exclusion of other topics, with the struggle with Nature, in the mines, the forests, the fisheries, and the fields, our four great primary sources of livelihood; and self-preservation, being the primordial instinct of nations as well as of individuals, has shown itself, paradoxical as it may seem, in attention to these primordial matters, to the neglect of those measures of self-protection which older civilizations are compelled to adopt. The main contributing cause has been the ever-present feeling that the Mother Country stands ready to protect us. The rapidly-rising tide of national self-consciousness and responsibility, to say nothing of considerations of self-respect, will in the near future change all this. The tone of the press is changing. The undertaking of the charge of the fortresses at Halifax and Esquimalt is a beginning in the right direction. And with a population of 6,000,000, and an annual income of about $80,000,000, an annual military expenditure of about $5,000,000 is not on the whole uncreditable to a community placed by Providence in a portion of the world so far removed from "war's alarums."

Nothing short of the compulsion of circumstances, such as a serious national and imperial crisis, is likely to divert the energies of the people of Canada from the industrial development of the

* Read at the Meeting of the British Medical Association, Toronto, August, 1906.

country into military channels. The enforced adoption of separate national existence by the United States a century ago is largely responsible for the enormous development of all sides of a nation's life over there, and until we in Canada do the same thing—but not, *not* in Heaven's name, by the same methods or with the same result of separation from the mother—we shall not come to our own as a nation, nor play our part in the partnership of nations known as the British Empire. Pardon, if you please, this digression, and let me return to the beaten track, expressing the confidence that there is stirring in the cosmic consciousness of Canada the hope that as history undergoes her evolution it may be granted to us to hand on the torch, and to be the go-between for the Motherland and her once-estranged daughter to the south of us, to bring her back, if not into full family relationship, at least into full sympathy and alliance with the group of nations which within this century will be found full-grown, but still owing heartfelt and unreserved allegiance to a common head, the Sovereign of the Empire.

The military forces of Canada are militia forces only. The militia is divided into three classes: the permanent force, the active militia, and the reserve militia. The latter body is unorganized and untrained, and really means the able-bodied males of the country of military age, and subject to service only if a *levée en masse* were ordered in time of great danger. The permanent force is enlisted for three years' continuous service only within the confines of Canada, and so corresponds to the standing army of other countries. It embraces all arms of the service, with details of all the administrative and corps troops, and exists mainly for three purposes: (1) To act as instructional troops, (2) to aid the civil power in case of need, (3) to care for the fortifications and military stores of the country. This establishment numbers all told about 5,000 officers and men of all arms, but they are constantly much under strength, the industrial activities of civil life being so many and so tempting that recruiting is very difficult in times of peace.

The active militia, including the corps reserves, composed of those who have had three or more annual trainings, the organization of which has been attempted recently, is a force nominally of about 50,000 men; but only about 42,000 are on the establishment, and only about 40,000 have been trained this year. The higher commands, from the headquarters staff down through divisional and district commands to brigades and units, has come of late years to be pretty well organized, the main trouble hitherto having been that the Militia Act in force till 1905 was framed to meet the needs of the country while it was still occupied by the Imperial forces, from which staffs of all kinds were expected to be provided.

Under the present Act and the establishment of 1905-6 the following branches of the service exist in both permanent corps and active militia: Cavalry, Artillery, Engineers, Infantry, Army Service Corps, and Medical Corps. There are also the Ordnance Stores Corps and the Pay Department in the permanent staff, and in the active militia the Corps of Guides (Intelligence Officers) and the Signalling Corps.

Coming now more particularly to the Army Medical Corps, the establishment is about 1,500 of all ranks, including both permanent detachments and the units of the active militia.

It will be a matter of interest to some of you at least to know that we retain as one of the two main branches of the service the good old regimental medical officer, wearing the uniform of his regiment, a member of his regiment and its mess, with substantive rank, attained by length of service according to regulation, and not eligible for staff or other than regimental duty. The system is one which in a militia force, organized upon county lines, is far too useful to be given up. Each year's experience in annual training as Principal Medical Officer of this District confirms me more strongly in this view.

The other branch of the militia service is the Army Medical Corps, with an establishment, as already stated, of about 1,500 of all ranks; 18 field ambulances are authorized, and 16 have been organized in the leading centres from Halifax to Winnipeg. The commissioned establishment is:

Lieutenant-Colonels	12
Majors	25
Captains	25
Lieutenants	25

The Honorary Colonel of the Corps is the Honorable the Minister of Militia, Sir Frederick Borden, M.D.

As supernumeraries we have:

Dental Surgeons (Lieutenants)	18
Nursing Sisters	25

There is also to each unit one quartermaster, not a medical man, with honorary rank of captain.

The old distinction between bearer companies and field hospitals was done away with a year ago, and the unit of the Army Medical Corps is now the field ambulance, with total establishment for annual training of 90, eight of whom, including the quartermaster, are commissioned officers. This unit is organized in three sections: the bearer section (the old bearer company), the tent section (the old field hospital), and the transport section. Officers of the Royal Army Medical Corps will be interested, if

not envious as well, to learn that our transport is our own, and not, as is still the rule of the War Office, obtained from and maintained by the Army Service Corps.

Into the details of our equipment I shall not enter, as not being of any special interest to this Section. In general the technical equipment is identical with that of the Royal Army Medical Corps, and obtained from the same makers. Our tents are different. The bell tents are of khaki canvas, much darker and more comfortable in sunny weather, and better ventilated, and our ward tents are smaller and we think more convenient than the regulation marqué, besides being much better ventilated by wide-meshed netting in the inner roof along the ridge-pole. The low wire beds with ample bedding, tarpaulin flooring, and bright acetylene gas light from an excellent portable apparatus, combine to make the wards remarkably comfortable.

The service is a popular one; the rank and file usually easily recruited on account of the interest that the public in general take in all first-aid matters. The training of men in first aid to cases of fracture, hemorrhage, and conditions of suspended consciousness is very good so far as can be expected in the time at our disposal, twelve days in camp, though the zeal of all ranks induces at least as much extra training at headquarters every year as they get in camp.

The officers are, as a rule, well selected, the brightest and ablest of the younger practitioners being in all the centres very willing to accept commissions if they can afford it. It is not undue self praise, perhaps, to say that the Army Medical Corps on its organization in May, 1890, at once stepped into favor, and has maintained a grade of efficiency which, according to recent annual militia reports, is rivalled by only one other branch of the service in Canada, the Army Service Corps, and we are invariably treated by other arms of the service with consideration and goodwill. For the further credit of our profession, I may add that no other class contributes in proportion to its numbers in civil life so many enthusiastic and capable officers to other branches of the service. Artillery, Cavalry, and Infantry, all have combatant officers doing excellent work who, in civil life, are busy and public-spirited medical men.

The work of the corps, of course, has been so far confined to the care of the troops in camp for annual training. This is, of course, practically active service, but under specially easy and favorable conditions. The real problems of camp sanitation and control of infectious disease can scarcely be said to come before us at all in so short a time as a fortnight in a standing camp. Still there are invariably a few cases, such as measles, diphtheria, or smallpox, brought to camp in incubation; and it speaks well

for the promptness and discipline of both the regimental and the corps medical officers that in the two years during which I have had the medical charge of the camp at Niagara, of five thousand men or more, not a case has arisen of any contagious disease contvacted in camp. The sick parades of the units are held at 6 a.m. By 7 a.m. the field ambulance waggons have made their rounds, and by 8 a.m. at latest the day's sick are comfortably seen to in the tent divisions of the field ambulances; the camp sick reports for the day are dealt with, and orders for stamping out any reported contagion are issued from the Principal Medical Officer's office, and acted upon not later than 9 a.m. And the effectiveness of this supervision is shown in the fact, above stated, that not a case has yet arisen in camp in two years from contagion contracted at camp. Each field ambulance is provided with a steam disinfecting tank, though we have found that the boiling of a few ounces of formalin in a tightly closed bell tent in which infected clothing, etc., have been hung up, is simpler, less troublesome, and quite effective.

As regards qualifications, the requirements for regimental medical officers are slightly less than for Army Medical Corps officers. After one year as lieutenant, the officer if qualified becomes a captain. Four years as a captain entitles him to a majority, on further examination, unless the full Army Medical Corps examination has been taken at the outset. Ten years as major secures the rank of lieutenant-colonel.

The initial qualifying examination for Regimental M.D. includes:

(*a*) Regimental duties and discipline as per Regulations and Orders, 1904, and King's Regulations.

(*b*) Infantry drill, Part I.

(*c*) Regulations for Army Medical Services, certain specified portions.

(*d*) Manual for Royal Army Medical Corps.

The Army Medical Corps officers may qualify by one of the two following methods:

(*a*) Those who have served with an army in the field as medical officers may be considered eligible.

(*b*) Those who hold certificates of proficiency from one of the following training schools:

1. Royal Army Medical Corps Depot, Aldershot, England.
2. Volunteer Ambulance School of Instruction, London, England.
3. Canadian Army Medical Corps courses.

Previous to obtaining such a certificate the candidate must qualify in infantry training, Parts (I) and (II), at one of the Schools of Infantry, and subsequently he must obtain a certificate of equitation at one of the Schools of Cavalry.

Candidates must be also qualified practitioners according to law, and may not be over 45 years of age.

Speaking for my own district (No. 2) I can say that out of more than thirty Army Medical Corps officers not more than three or four have still to qualify, and the same proportion obtains among the regimental medical officers. This is not the time nor the place for detailing the syllabus of training and instruction. Suffice it to say that it covers the essentials, and makes it possible for the young officer by subsequent experience and attention to duty to become thoroughly efficient.

In closing, I must not omit to direct attention to the great value of the services rendered by the dental surgeons, one of whom is attached to each field ambulance for the annual training, and who are daily called upon to treat the commoner dental affections elicited by sleeping on the ground, exposure, or change of food.

THE TREATMENT OF ECZEMA BY THE ROENTGEN RAYS.

BY CHARLES LESTER LEONARD, A.M., M.D., PHILADELPHIA,
Late President of American Roentgen Ray Society.

To understand the variations in technique essential to the successful treatment of eczema by the Roentgen method, the polymorphous expression of this disease must be understood fully. These variations appear frequently in the same individual, but often must be recognized in isolated manifestations. The intensity of the process being responsible for its characteristics, while it is chiefly confined to the epithelium, yet ulcerative processes, in severe cases, may expose the chorium, while secondary infection often complicates and masks the disease.

These varying stages point to variations in the resisting powers of the surrounding normal cells and those involved but not destroyed by the process itself. Variations in treatment are essential to its successful adaptation, and are based on the manifest condition of cellular vitality each stage presents.

Eczema is one of the superficial conditions in which the Roentgen method has been shown to have power to promote the absorption, destroy pathologic cells, increase the vitality of the normal cells and restore the tissues to a normal condition without scarring. Since the disease does not threaten life, and the cure is undertaken for cosmetic reasons in the majority of cases, it is essential that the rays be used with the utmost care in order to avoid any disfiguring after-effects. In the majority of cases the suderiferous glands and hair follicles are but mildly involved, and care must be taken not to injure them.

The etiology of eczema is unknown, and the results of the Roentgen treatment have made it even more indefinite. They have shown that an agent acting in purely a local manner can cure cases of all degrees of severity and in all situations, the acute and the chronic, without systemic medication. These cures have been permanent, and have been accomplished in chronic cases that have defied expert treatment for years. They have thus discredited the plea and theory of systemic deficiency, often advanced in chronic cases as a reason for their rebellious chronicity. They have demonstrated that this agent acting locally, by destroying pathologic cells and stimulating normal cells to renewed vigor, can restore the normal and ensure permanent vitality to the tissues.

These results can only be accomplished by employing the Roentgen rays in due proportion to the conditions present and the results demanded. It is an agent capable of producing effects

varying from the mildest stimulation to the destruction of pathologic cells, absorption by normal processes or total destruction of the healthiest and most highly vitalized tissues.

An agent possessing such a wide variation in physiologic action must be used with circumspection, but if it is not used with sufficient energy, where the lesion demands it, successful results cannot be expected. Those lesions that resist this method of treatment, resist it because the necessary quantity and quality have not been adapted rightly to the particular case in hand. While almost any kind of Roentgen treatment will cure a case of eczema if persisted in long enough, if Roentgen rays of not too high penetrability are developed, the treatment is hastened and the results are best when the dose, in quantity and quality, is adapted to the particular characteristics of the individual lesion and case.

In determining this dose, the character of the lesion, its chronicity, and the vitality of the patient must be taken into consideration. It is impossible to make cells grow and to cause pathologic processes to become absorbed unless there is nutrition to stimulate. Fortunately the theory of systemic deficiency has become widely known, and the majority of cases come to us in good physical condition. When this is not the case, general remedial measures to build up the system if possible in conjunction with the family physician, are to be employed as local stimulation and alterative effects cannot result in a cure unless the cells have something to build on. Increased nutrition is essential to increased vitality.

In mild cases simple stimulation is sufficient to produce healing and mild stimulant doses should be employed. These cases are generally curable by older methods and they are seldom referred before they become chronic.

In the chronic squamous variety, with an absence of ulceration and infection, the local condition of the skin is poor; nutrition is low and there is little vitality. In these cases too severe primary treatment is liable to result in a severe dermatitis. The alterative effect is to be produced and absorption stimulated, but not too rapidly. The tube employed in such cases has an equivalent parallel resistance of about one-fourth of an inch, while the cathode stream is distinctly visible. The platinum is placed six to eight inches distant from the skin, the current being regulated to one and a half to two milliamperes. It is better in these cases to avoid a new tube, or if a new tube is used, an aluminum filter should also be employed. New tubes at such low vacua are particularly active, and unless a milliampere reading is employed to gauge its action serious results to the vitality of the skin may result. Such severity of action is sometimes necessary in obstinate cases, but the clinical experience of the operator must guide him,

and experimental knowledge obtained by milder dosage in the same case must be obtained previously before so severe a dose is employed. In the chronic cases of the squamous variety such mild treatment and dosage should be continued until a mild erythema results, when treatment is suspended until the result of the treatment can be noted. If the lesions do not yield a more severe dose can then be employed at longer intervals, say, twice instead of three times a week and the healing process hastened, for by this time the vitality of the normal cells will have been increased so that they will not be endangered.

In the treatment of lesions on the face, and in particular lesions of the squamous type and the variety known as orbicularis oris, the utmost care must be used not to exceed the erythema, although its production may sometimes be necessary, especially in the cracks at the angles of the mouth. These deeper lesions should be treated separately, through small openings in the protecting lead, and stronger doses should be applied until resolution and absorption take place.

In those forms of eczema where infection is present and secondary glandular infection can be noted, the treatment must be more rapid and severe. These cases generally have been subjected to severe treatment with caustics, cauterants and curetting, until the tissues will withstand all but the most severe treatment. Powerful and massive doses are demanded and can safely be applied if the operator's clinical experience has fitted him to note the necessary reaction immediately as soon as it has been produced. Such treatment is dangerous in the hands of the inexperienced operator but these cases demand such a treatment to effect a cure.

The technique of treatment thus consists in the employment of tubes of very low vacua, their effect to be varied by the distance of the tube and its platinum from the skin, the amount of current passing through the tube, the frequency of the application and the employment of filters, either of aluminum between the patient and the tube, or the coating of an old tube within itself, the variation in dose depending initially on the character and history of the particular lesion and the condition of the patient, and, finally, on the reaction of the pathologic and the normal tissues to the treatment employed.

In no line of therapeutics is the dictum more true than in Roentgen therapy that the best results are obtained by applying the remedy in physiologic dose to the individual patient, making it strong enough to accomplish the results and no stronger. One of the greatest defects in Roentgen treatment to-day is that timidity in dosage, which is bred of ignorance and married to inexperience.

Selections, Abstracts, Etc.

SURGICAL ANESTHESIA.

Local Drug Anesthesia.—The three local anesthetics at present available for topical applications—instillation and injection—are cocaine, B-eucaine, and stovaine. The dangers of cocaine when injected in concentrated solutions have rendered the surgeon very cautious in its use. The risk has been much reduced by the simultaneous employment of extracts of the suprarenal glands. Reclus practically makes use of infiltration anesthesia fortified by addition to the solution of a small amount of cocaine. He employs a 1 per cent. solution for the cutis, and a more dilute solution for the deeper structures. He limits the amount of the salt injected to 0·19 gramme. Schleich's method has to a great extent replaced Reclus'. Schleich employs three solutions: the first, which is fortified by the addition of morphine hydrochlorate, contains 0·1 per cent. of cocaine—this he employs for skin anesthesia; for deeper and less sensitive structures he uses one containing only 0·01 per cent. of cocaine, while into hyperesthetic areas he injects a 0·2 per cent. solution. The first injection is made into a small point rendered analgesic by the ethyl-chloride spray. This raises a wheel, into the border of which the subsequent injections are made, until the whole cutaneous area of operation is rendered anesthetic. The deeper layers are treated in a similar way. One hundred c.c. of the normal solution can safely be injected in the deeper layers, as the major part of the fluid drains out when an incision is made, and the rest is very slowly absorbed. The addition of adrenalin to Schleich's solution for deeper tissue anesthesia is of value, as it limits absorption and prolongs the anesthesia.

Both B-eucaine and stovaine are less dangerous than cocaine, the lethal dose of eucaine being about one-quarter and that of stovaine one-third to one-half that of cocaine. Neither eucaine nor stovaine exhibits the vaso-constrictor effects of cocaine; on the contrary, it must be stated that stovaine produces some dilatation of the capillary vessels, besides exerting a tonic action upon the heart. The sensation in the parts after the use of stovaine is less unpleasant than after the application of cocaine. The analgesic properties of stovaine and B-eucaine are little, if at all, inferior to those of cocaine.

The three questions of moment which concern the use of locally

acting anesthetics are: the duration of the anesthesia, the extent of the area to be dealt with, and the amount of the drug that can with safety be employed.

The duration of cocaine, stovaine, and B-eucaine anesthesia may be prolonged by retarding the local circulation. Prolonged insensibility can best be secured by admixture with the local anesthetic of adrenalin, hemisine, or some of the various suprarenal gland extracts. Where these vaso-constrictor glandular products are employed with the local anesthetic analgesia is more slowly developed than when the anesthetic agent is employed alone. The time required to allow local insensibility to become fully developed has an advantage. Where the analgesic agent is employed alone, the edematous condition of the tissues somewhat masks the anatomic details; by allowing time for this artificially produced edema to subside, the field of operation is rendered clearer.

The question is sometimes asked whether it is better to inject the adrenalin in combination with the local analgesia or to allow time for local insensibility to be established before venturing upon its use. In our own practice we have been guided by the following considerations: It is always desirable to rapidly develop cutaneous analgesia, so that, in making the early skin injections, we consider it better practice to use no suprarenal extract. When cutaneous insensibility has been established, we combine the glandular extract with the local anesthetic agent for the deep injections. This limits the time of waiting to about twenty minutes, allows time for the edema to subside, and annuls sensation for a couple of hours.

In order to spread the anesthetic over large areas we require a large enough quantity of the fluid medium at our disposal. A solution of sodium chloride (0·5 gramme to 100 c.c. of distilled water) is the best menstruum. From 100 to 250 c.c. of this solution is sufficient for most cases. Given due consideration to the toxicity of the various substances, we find that it is seldom safe to exceed 0·17 gramme of cocaine used in combination with adrenalin, 0·30 gramme of eucaine, or 0.25 gramme of stovaine. This is the maximum limit which we allow ourselves.

In using any local-acting anesthetic it were well to remember: (1) That sterilization of the syringe is a very necessary precaution. If the sterilizing solution contains any trace of boric acid, the syringe should be thoroughly washed out with boiled distilled water before being used for stovaine. (2) The analgesic solution should be sterile: cocaine solutions must always be freshly made; eucaine and stovaine solutions stand heating to 150 deg. F., as they do not undergo decomposition. (3) Rapid injection is to be avoided; sudden distension causes an unpleasant feeling, if

not actual pain. (4) The fluid used should not be too hot or too cold, for the same reason. And, lastly, all dragging on the parts during operation should be avoided, lest structures beyond the area of infiltration be pulled upon. This last rule requires to be strictly adhered to, as the anesthesia caused by local injections does not extend to the abdominal viscera, and the handling of these organs causes both shock and pain. For abdominal sections, regional or spinal anesthesia should be employed. These operations are utterly unsuited for local anesthesia.

In indicating the sphere of utility of local anesthesia, it were well to insist that whilst all three agents are equally available for operation on the soft parts, B-eucaine is not absolutely satisfactory in operations involving the division of bones and cartilages, and stovaine is open to the same objection, but to a lesser extent. When fortified by the addition of a minimal amount of cocaine and morphine, stovaine solutions answer admirably. Tracheotomy is an operation specially suited for local anesthesia. General narcosis only adds to the difficulties of the operation, whilst under local anesthesia the operation is rendered practically bloodless, and can be carried out with great rapidity, deliberation, and satisfaction. The combined stovaine and adrenalin solution renders it practically painless and bloodless. The area anesthetized should be somewhat larger than that of the operation, to prevent pain from dragging on the parts during blunt dissection. Twenty minutes should be allowed for insensibility to be established before the operation is commenced. In ophthalmic practice all operations upon the cornea and conjunctiva, including cataract extractions, may be performed under instillation of a locally-acting anesthetic. Cocaine is the anesthetic of choice; eucaine and stovaine cause more smarting and less analgesia. Stovaine also causes a slight epithelial desquamation. When used by subconjunctival injection, stovaine appears to be superior to cocaine as far as insensibility goes. The combined use of stovaine and cocaine is, however, preferable to the use of either alone. In dental practice, more particularly tooth extraction, stovaine stands unrivalled. Its instillation causes an inconsiderable amount of pain, and no subsequent indisposition. In work upon the throat, nose, larynx, and ear, stovaine has a great future. In nasal work a 5 per cent. solution of stovaine answers as well as a 10 per cent. solution of cocaine. In operations upon the septum the infiltration method of anesthesia is imperative, as mere painting does not answer. In ear cases instillation of stovaine meets all requirements. In operations upon the larynx the application of a tampon, soaked in 20 per cent. solution of stovaine and powdered over with some of the same substance in its raw state, allows of perfect access. For operations upon the rectum and anus we much prefer regional or

spinal anesthesia; still, in the case of so simple a matter as the division of a fissure or the opening of external fistulæ local injection answers well. In general surgical practice, for the removal of wire sutures, small tumors, etc., stovaine is the anesthetic of choice.

Regional Anesthesia.—This method, which owes its introduction to Oberst, essentially consists of the injection of a local anesthetic into the area surrounding the efferent sensory nerve. The local circulation has to be arrested for this purpose, so that Oberst's method is limited to operations upon parts where the circulation can be readily strangled by an elastic bandage. The objection to its use is that the after-pain is troublesome. Hackenbruch's method of circular anesthesia is another variation of the method of regional anesthesia, and Brann's combined procedure the best of the three. For anesthesia by this method we much prefer the combined use of stovaine and cocaine to Hackenbruch's formula. In rectal surgery, injection made in the neighborhood of the four chief nerve trunks allows of free relaxation of the parts and a bloodless field for operation if adrenalin is combined with the injection. The ligation of piles, the removal of polypi, and a very complete examination of the rectum can thus be made without causing either pain or inconvenience.

Spinal Anesthesia.—This last and most promising of the methods of surgical anesthesia resembles great narcosis in the extended field it offers for operations, and exceeds local analgesia in the security it affords from untoward effects of general anesthesia. In traumatic surgery of the lower extremities, in operation upon the testes, rectum, and lower half of the body—say, herniæ—spinal anesthesia eliminates the risk of shock and abolishes pain. In operations upon the hip-joint, where general unconsciousness is needed, a whiff or two of chloroform secures this end, while the spinal injection insures the required analgesia. The anesthesia attained by this method is very complete, and patients can be operated upon within two minutes from the time of making the injection. Where stovaine is the anesthetic employed—indeed, it may be said that stovaine is alone suitable for administration by this method—signs of intoxication are usually absent. We have had, however, reported to us a case in which sickness and poor pulse were noticed. The anesthesia was, however, excellent, and the symptoms did not interfere with the carrying out of the operation—cure of left varicocele. As the general symptoms were marked, and began before the spermatic cord was pulled about, they seem to be due to the anesthetic. The amount used was ½ c.c. In four cases it was noticed that the anesthesia was accompanied by a temporary paralysis of the lower extremities. This effect lasted for two or three hours after

the operation. In none of our cases did hyperesthesia follow the infiltration. In one case—male, aged fifteen, operation left varicocele—no anesthesia was present; after waiting twenty-five minutes, the operation was completed under general anesthesia. Such a result is, however, very rare.

To the general practitioner, who is ofttimes called upon to perform emergency operations without skilled assistance, spinal anesthesia by stovaine injection affords singular advantages. To the specialist, who has to face the danger of major operations upon the abdominal viscera and the hip-joint, it is equally serviceable, as it presents so many points of interest. In fact we may, with Rattner, say "stovaine is a very valuable drug, and one likely to revolutionize the anesthesia question."—*Treatment*, London, Eng., Jan., 1906.

HOW IT STRIKES A CONTEMPORARY.

In an address delivered before the Royal Medical Society of Edinburgh, on October 26th, Sir Dyce Duckworth took a somewhat gloomy view of the present state of things in the commonwealth of medicine. He said its dignity seemed to have declined in recent years. This he attributed partly to the fact that the average modern physician was not, as formerly, a man of general scholarship and wide learning; partly to the inflated pretensions of some members of the profession, and to the inherent inaptitude of not a few of them to adapt themselves to their varied social environment. While we admit that the profession is yet far from being what it should be in an ideal state of society, we venture to think that Sir Dyce Duckworth has drawn too sombre a picture. We would, therefore, ask our readers to compare it with another drawn by an artist who will not be suspected of a wish to flatter us. In his recently-published *Social Silhouettes*, that keen critic of contemporary life, Mr. G. W. E. Russell, gives a place in his portrait gallery to "the doctor." It is always interesting, and sometimes instructive, to see ourselves as others see us, especially when the eyes that look upon us are those of an intelligent observer. Mr. Russell knows English Society, with and without the capital "S," of the present day as few men have the opportunity of learning its various aspects, and, in the words of Hamlet, he shows the age and body of the time its form and pressure. He is equally in his element in portraying the public schoolboy, the schoolmaster, the don, the clergyman of every grade from curate to bishop, the politician, the squire, the soldier, the city man, the professional philanthropist, and the clubman. For some reason he fights shy of lawyers. The doctor he handles

with unexpected tenderness; this may, however, be in the spirit of Izaak Walton's advice to the angler, that he should deal with the worm gently as though he loved him. He points out the vast difference between the doctor who takes our temperature to-day and the doctor whom Dickens drew. The change, he says, is not so noticeable on the higher rungs of the professional ladder. "In Harley Street and Grosvenor Street, and Brook Street, where dwell the medical baronet and the F.R.S., solemn plausibility still holds its own." The oracle of Cavendish Square, having to wean a dyspeptic patient from a breakfast of curried lobster, said in an aphorism "of almost Pauline dignity," "I seek to impose a yoke upon you that you may be truly free." Still, we are told, the great men of the profession maintain the grand manner and impressive devices of the past. Still they recommend a diet at once light and nutritious; still they prescribe change of air, gentle exercise, a complete freedom from anxiety, and a winter in the South of France. Still they assure us that there is no appearance of danger, and when the patient dies, murmur with the most magnificent gravity, "Of course, after what I said at my last visit, this catastrophe has not taken you by surprise." All this, says Mr. Russell, goes on every day as it has gone on from immemorial time, and will go on as long as human nature is subject to illness and amenable to humbug. We hasten to explain that the word "humbug" used in connection with consultants is not ours but Mr. Russell's. It may be pleaded in excuse for him that *rien n'est sacré pour un sapeur.* Sir William Broadbent once said, in a magazine article, that a touch of charlatanism goes far to constitute the fashionable family doctor. If the family doctor cared to retaliate, he might quote Mr. Russell, but the controversy would scarcely be edifying. It is in the lower orders of the professional hierarchy that, according to the author, the greatest changes are seen. Bob Sawyer and Ben Allen and their kind have disappeared. "The young medico of the present day is a pleasant youth of gentlemanlike manners, with a moustache, frock coat, and patent leather boots; or, when he is off duty, a pink shirt, a parti-colored suit, and tan shoes." As likely as not, he is a graduate of Oxford or Cambridge, and collects prints or china, paints in water colors, or sings in a choir, and takes his blameless recreation at golf or lawn tennis. Often he is a vigorous athlete; not seldom he is a sportsman. "Not for our budding doctors are the joys of beer and All-Fours, which delighted Dr. Haggage (of 'Little Dorrit'), the pork chops and brandy on which Bob Sawyer feasted, or the 'stunning gin-punch' which Sam Huxter proffered to Arthur Pendennis." They are smart, well-mannered, and well-educated young men, who know a good glass of champagne—even, we may add, though they

may believe its therapeutic virtue to be *nil*. "They frequent the opera and criticize Mr. G. B. Shaw's plays, and they learn before they are thirty to practice that dignified self-restraint and that mysterious air of knowing a great deal more than they choose to say, which form so important a part of their professional equipment." With these advantages the young doctor can scarcely fail to get on. "His appearance, his voice, his social stamp, his liberal education, all stand him in good stead." In due time he makes his mark. He becomes the friend and adviser of one family after another, and puts the crown on his rising fortunes by marrying the only daughter of Sir Grosvenor Le Draughte, who brings him £30,000 and the reversion of the paternal practice. We welcome this testimony of a writer who can scarcely be regarded as biassed in favor of the medical profession, to the immense improvement which has been brought about, mainly by the larger education and better technical training of modern doctors, but partly, too, by the increasing enlightenment of the public mind, which enables it more and more to understand the aims of scientific medicine and to appreciate the work of those who are striving to enlarge the scope of its usefulness. Mr. Russell has painted only the outside of the modern doctor, but considering the coarse caricatures which are still too common, it is something to be thankful for that he has produced a picture which, on the whole, is pleasing and attractive.—*B. M. J.*

THE KHARTOUM LABORATORIES.

Dr. Balfour, the Director of the Wellcome Research Laboratories* at the Gordon Memorial College, Khartoum, has just brought out his second report of the work accomplished at that institution during the last year. The growth of this research laboratory has really been phenomenal. Starting in 1903, its first report, which appeared in the autumn of 1904, included an account of the work performed during the first year of the institution's existence, that is to say, down to the end of January, 1904. Since that date quite a large staff has been got together. In addition to the director, the laboratory can now boast of a chemist, a travelling pathologist and naturalist, an economic entomologist, two assistants, and a clerk, while Mr. F. V. Theobald, the author of the well-known book on mosquitoes, has kindly acted as consulting entomologist, and Mr. Austen, of the British

*Second report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. Andrew Balfour, M.D., B.Sc., F.R.C.P. (Edin.), D.P.H. (Camb.), Director, Fellow of the Royal Institute of Public Health, Member of the Epidemiological Society, the Incorporated Society of Medical Officers of Health, etc. Khartoum: Department of Education, 1906. (Demy, 4to, pp. 225.)

Museum, always ready to help in subjects dealing with the identification and classification of *Diptera*, has rendered valuable assistance. Such a permanent staff of course means the expenditure of a good deal of money, and to Mr. Wellcome belongs the credit of having supplied this very necessary article. In the state of scientific research in England at the present day, it is extremely gratifying to find a wealthy Englishman expending some of his money on an object such as this, for it is by such institutions for scientific work and observations as this that humanity will benefit in the near future. The report, looked at as a whole, shows throughout its pages the same munificence as has been expended on the founding of the laboratories; no expense has been spared in its production, the best artists have been enlisted to color its pages, the paper on which it has been printed is of the best, the photographs so abundantly interspersed throughout it are excellently reproduced and the binding and general arrangement could not be improved upon. In addition to all this, however, the scientific work and general observations contained in it are good, and this, after all, is the most important factor, that on which the thing judged must stand or fall. Mr. Wellcome has certainly been fortunate in getting the services of Mr. Terzi to delineate the various flies. His work is deservedly becoming well known, owing to his beautiful drawings of the tsetse and other flies for the British Museum, and for Mr. Austen's various monographs on those subjects, and it is not too much to say that they will remain as standards of excellence for many years to come. Such work, we are aware, is often too poorly remunerated, but we are sure that a man of Mr. Wellcome's generosity will have seen to to this, and rightly so, as the drawings greatly enhance the value of the report. Mr. Richard Muir, of Edinburgh, has also been fortunately chosen as the artist for the colored representations of the various blood parasites which illustrate some of the different articles; his plates are beautifully drawn, and have been excellently reproduced. In addition to these works of art many photographs of natives, insects, country scenes, etc., give character to the report, which consists of an introduction, fourteen different papers on mosquitos, flies, blood parasites (hemogregarines, leucocytozoa, trypanosomes), routine work, miscellaneous notes, a report by the travelling pathologist, and a report of the chemical laboratory. A list of illustrations and an index are provided. Dr. Balfour contributes the first paper, dealing with mosquito work in Khartoum and the Anglo-Egyptian Soudan generally. It contains nothing new, but is inetresting nevertheless, especially as it backs up Professor Ross in his contention as to the value of mosquito destruction. Dr. Balfour writes: "For something considerably under £100 per annum, Khartoum

is kept practically free from malaria, and the inhabitants are secured, to a very great extent, from the persistent and annoying attentions of these winged pests, which, as a rule, add so much discomfort to life in the tropics. I do not think the above is a large sum to pay for such immunity." Such a statement speaks for itself and shows what can be done. Mr. Austen classifies a number of blood-sucking flies and other diptera in his usual care-manner, amongst these being two new species and one subspecies of Tabanidæ; he rightly calls attention to the fact that it is important that material for identification should be sent home in proper condition. Mr. Theobald writes some interesting descriptions of mosquitos and other insects. A paucity of material is evident in some of these—for example, the new species *Culex rubinotus,* is described from two females alone, no males, larvæ, or pupæ having been forwarded, but on the whole perhaps it is better to note their occurrence now and wait for those omissions to be supplemented later. The most important paper in the report from the purely scientific standpoint is that by Dr. Balfour on "A Hemogregarine of Mammals." This may lead to far-reaching results, because before this discovery parasites of this nature were only supposed to exist in cold-blooded vertebrates. The life-history of the parasite in the jerboa, the animal in which it was found, is carefully worked out, and attempts have been made to find its extra corporeal phases in fleas and mites. The experiments, however, are not exhaustive enough, and will have to be worked out in greater detail. The finding of parasites (*Crithidia*) of the flea itself is of great value in supporting Ross in his view that Schaudinn's work on the development of *halteridium* in mosquitos requires revision, and the author might well follow this point up. The chapter on trypanosomiasis in the Anglo-Egyptian Soudan consists largely of a long series of animal experiments which do not afford very interesting reading and might have been abridged considerably, especially so as the conclusions are not very far-reaching, the most important being the discovery of what Laveran believes to be a new trypanosome in cattle, to which he has given the name *T. nanum.* The travelling pathologist's report contains some useful information on trypanosomes and embryo filariæ; but his time seems to have been rather injudiciously mapped out, 40 days out of 127 for actual scientific work being very small, and a freer hand should have been given him in his work. A memoir by Dr. Beam, the chemist, on the chemical laboratory brings this very interesting report to a conclusion: in it some very useful economical information is given, and all that remains is to congratulate Dr. Balfour and his collaborators on the success of their work.—*B. M. J.*

ABSTRACTS.

Relapsing Aphthous Stomatitis.—F. Schilling (*Zentralbl. f inn. Med.*, May 19th, 1906) describes a form of relapsing aphthous stomatitis which occurs in adults with defective teeth. Aphthous stomatitis in infants consists in circumscribed patches of fibrinous exudation in the mucous membrane of the tongue, cheeks, and gums, and is usually accompanied by malaise, pyrexia, and enlargement of the submaxillary lymphatic glands. It occasionally occurs in small epidemics, and is communicable by the common use of spoons or teats of feeding bottles. Various diplococci, streptococci, and ovoid bacteria have been described as the cause. In adults aphthous stomatitis may accompany diseases of the stomach, the acute exanthemata, and phthisis. But a relapsing form has not been described. This occurs at irregular intervals, usually every four or five weeks, and produces great pain and difficulty in swallowing, masticating, and talking. Patches are frequently situated beneath the tip of the tongue, in which position they are exceedingly irksome. The writer was at first at a loss to explain the origin of this complaint, but eventually found that it was due to oral sepsis from periodontitis and neglected stumps. A lesion of the mucosa, which is usually due to an ill-fitting plate or the sharp edge of a carious tooth, is the exciting cause of a relapse. Possibly this explains also the frequency of aphthous stomatitis in infants during dentition. These aphthæ are often ascribed to a disordered stomach, but they are curable by the dentist, and not by the gastric specialist. In addition to frequent brushing of the teeth, and the use of a disinfectant mouth wash (3 per cent. solution of peroxide of hydrogen), the plate should be nightly placed in a 4 per cent. formaldehyde solution.—*B. M. J.*

Insanity and Tuberculosis.—Marie (*Revue de Médecine*, July 10th, 1906) discusses the intimate relationship between mental disorders and tuberculosis, the chief causes leading to the excessive mortality of asylum patients from tuberculous disease, and the means which may be adopted to prevent spreading of contagion, and to lower the incidence of the disease in asylum patients. Numerous observations have shown the close association existing between mental disease and tuberculosis: thus, of the children of one family some become insane, others die from convulsions or meningitis, others become phthisical. The great causes of the dissemination of tuberculosis in asylums are the unclean habits of the patients, and the neglect to properly dispose of the sputum and other excretions of those suffering from tuberculosis. Infected sputum may be expectorated on to the floor,

bedding, linen, etc., and when dried affords facility for the wide dissemination of tubercle bacilli. Owing to the fact that the insane usually swallow their expectoration, in those affected with pulmonary phthisis a great liability to the development of tuberculous disease of the intestines exists; the dejections of these patients being frequently deposited wherever the patient thinks fit, another source for the dissemination of tubercle bacilli is provided. As a result of inquiries made by scentific societies in England and America it appears that the following are the chief causes for the special frequency of phthisis in asylums: (1) Overcrowding, with resulting insufficient air for the patients, especially at night; (2) insufficient time of patients in open air; (3) defective ventilation and firing; (4) improper habits of the patients and insufficient disinfection of the linen; (5) vices of alimentary régime. In Germany, whilst the death-rate of the whole population from tuberculosis is 0.39 per cent., in an asylum for idiots Dr. Wulff found it to be 1.3 per cent. In the asylum of Hofheim Dr. Oswald found it to be 25.12 per cent. From Dr. Clouston's statistics the death-rate from tuberculosis of lunatics in Scotland is 27 per cent., whilst according to Harrington 60 per cent. of the asylum patients in America die of tubrecle. With a view of reducing this great mortality of insane patients from tuberculous disease the following remedies have been advised: (1) Early diagnosis; (2) isolation of all infected patients; (3) construction of smaller asylums; (4) prevention of overcrowding, and an increase of the air space for each patient; (5) diminution of the number of beds in each dormitory; (6) a more complete system of ventilation; (7) suitable measures to prevent the spreading of the disease by the sputum; (8) inspection of alimentary régime; (9) construction of special hospitals and sanatoriums.—*B. M. J.*

New Method of Bone Union.—R. G. Anderson (*Journal of the Royal Army Medical Corps*, London, March) describes methods that involve the use of simple contrivances and obviate the necessity for drilling bone and using wire. The contrivances employed are called by him the medullary spike and the bone fracture clamp. They depend for their effect in the one case on the support of the medullary cancellous tissue alone, and, on the other, on the sole support of the compact bone. The medullary spike consists of a double-pointed steel spike, divided by a raised flange into two unequal lengths, each from a quarter to two inches long, and varying according to the necessity of the case, alterations being made, if necessary, during the operation by means of a file or cutters. The fracture clamp is a simple instrument, consisting of two toothed jaws, each formed by the junction of small parallel steel rods, armed at their extremities with sharp spikes,

and joined centrally by a free pivot, so allowing their close adaptation to any inequality of surface or variation of position which may be considered advisable. The jaws grasp the bone on either side of the fracture and are placed, one superficially, the other deeply. They are joined by a tension-screw of fine steel, which pierces the pivots and passes directly through the line of fracture, to the obliquity of which it accommodates itself accurately. The tension wire, some three or four inches long, is finely threaded and provided with a minute nut, which can be screwed down, thus clamping the jaws firmly home to any required position, after which any surplus is filed off and discarded. The medullary spike, used by itself, is admirably suited to most cases of transverse or moderately oblique fracture in shafts with a small central cavity. These include all the long bones with the exception of the femur, humerus and tibia, and also in all packed cancellous extremities and in one of parallel bones in which the sound bone acts as a natural splint to its broken companion. The fracture clamps are suited to almost any break, if not too oblique or spiral in direction, and if, in such oblique cases, no more transverse position can be utilized. The method of application of both spike and clamp are described in detail.

Perforated Ulcer of Duodenum.—S. M. Smith (*The Lancet*, London, December 31st) reports 14 cases. In 9 of these there was a history of preceding digestive disturbance, but in only 3 were the previous symptoms suggestive of duodenal ulceration. Melena did not occur in any case, and hematemesis occurred in only one case. In most instances the perforation took place while the patient was at work—in 2 cases while lifting a heavy weight. The characteristic sudden severe pain in the abdomen was the initial symptom of perforation in every instance. The pulse rate at the time of examination in 10 cases was from 100 to 144, in 7 of these over 120. Smith regards the following as important localizing symptoms: 1, The history may suggest duodenal ulcer; 2, the localization of the original pain of perforation to the right hypochrondrium; 3, symptoms referred to the right side of the abdomen and most marked in the appendix region, but with a definite history of onset in the right hypochondrium. In 2 cases the ulcer was excised; in 4 cases it was sutured; omental grafts were made use of in 3 cases. In 7 cases general and profuse irrigation of the peritoneal cavity with hot normal saline solution was employed. Of these 7 patients, 5 recovered. In 4 cases the peritoneal cavity was mopped out with moist swabs. Of these 4 patients all died. In none of the cases was drainage dispensed with; in 4 it was suprapubic and epigastric; in 5 it was suprapubic, epigastric and right lumbar; in 2 it was epigastric only. Of the first set, 2 patients recovered, but one of these had to be

drained in the right lumbar region after a few days. Of the second set 3 patients recovered. Of the last set none recovered.

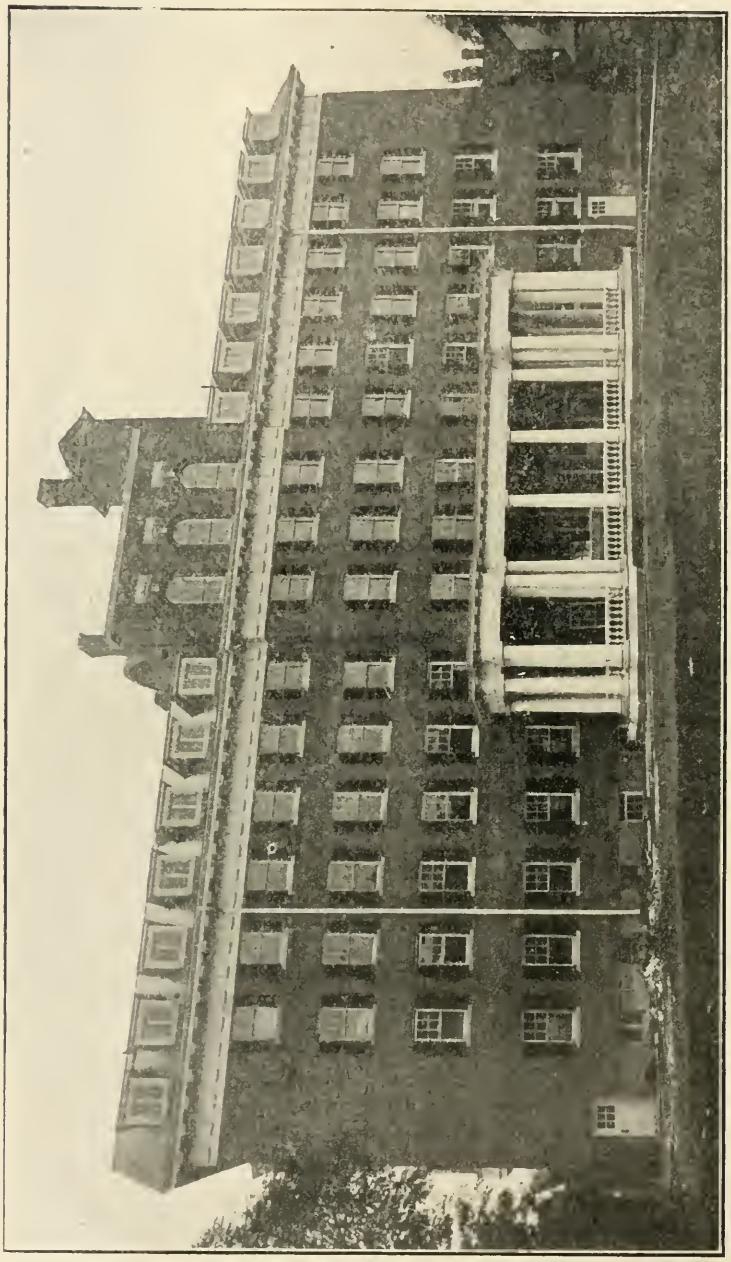
The Cystoscope.—D. Newman (*British Medical Journal,* March 31st) discusses the cystoscopic appearances in some diseases of the bladder and kidneys, and describes a method of illustrating diseases of the bladder and the appearances in renal disease by the opaque projector. He summarizes his findings as follows: 1. When one orifice is altered and the other normal, the renal lesion is on the side of the abnormal ureter, and the character of the deformity of the orifice may indicate the nature of the renal lesion. 2. Active congestion and swelling of the mucous membrane in the neighborhood of the orifice and along the line of the ureter, also swelling and pouting of the lips, denote acute irritation of the pelvis or parenchyma of the corresponding kidney. 3. A dilated orifice, the lips being sharp and clearly defined, the mucous membrane between the lips acutely congested, while the color of that of the bladder is little changed, denotes recent and acute inflammation or mechanical irritation in the corresponding pelvis. 4. A dilated orifice, the lips being thickened and only slightly rounded, the mucous membrane between the lips of a dark-red color, while the mucous membrane of the bladder is deeply injected and pigmented, especially along the line of the ureter, denotes descending ureteritis with dilatation. 5. An elongated or dilated mouth with hyperemia of the lips indicates acute inflammation of the parenchyma or recent distension of the renal pelvis. 6. A punched-out orifice, marked thickening of the lips, induration and congestion of the surrounding mucous membrane, indicate a dilated ureter with ascending ureteritis, the infective process extending along the surface by continuity. 7. A pinhead opening one well-defined ridge of deeply-pigmented mucous membrane denotes induration of the walls of the ureter from ureteritis, the infective material being conveyed from the primary focus in the kidney or bladder, principally through the lymphatic channels. 8. Pinhead contraction of the mouth without other vesical changes denotes spasm induced by the presence of a rough calculus impacted in an irritable ureter. 9. Inflammation of the mouth and thickening of the lips, with inflammatory changes limited to the mucous membrane immediately surrounding the ureter orifice, denotes mechanical irritation of old standing. 10. Simple dilatation of the mouth, without much thickening of the lips, and with congestion limited to the orifice and neighboring parts, suggests mechanical irritation of recent origin.

Thyroid Treatment of Obesity.—Rheinboldt (*Zeitschrift f. klinische Medizin,* Berlin) describes experiments with dogs showing the remarkable efficacy of thyroid extracts in reducing weight.

The by-effects of thyroid treatment have been most numerous in the past when it was applied in obesity, as it is in this, that abuse of the preparation is most common. Some of the symptoms observed have evidently been the result of damaged goods, the syndrome suggesting that of sausage poisoning. These mishaps are growing constantly rarer, as the thyroid is not being used so much in its natural form. Under thyroid treatment, he continues, efforts must be made to insure abundant feeding, especially with copious amounts of albumin. The treatment of obesity is favored by undertaking it during a period when the organism, on account of preceding under-feeding, is inclined to take up more albumin than usual. He will report later his experiences with patients treated on these principles.

Mercurial Inunctions and their Action on Urinary Organs.—C. Klieneberger (*Zeitschrift f. klinische Medizin,* Berlin) describes the findings in 37 cases after mercurial inunctions. They prove that this method of treatment is not so harmless as generally supposed. Changes in the urine develop almost constantly and are due to the action of the mercury on the secreting parenchyma of the kidneys. As this effect occurs early and after small doses, when manifest albuminuria develops the kidneys are already severely affected and general mercurial intoxication installed. As mercury is such an efficient remedy, we cannot dispense with it, he adds, but we should not give it for a long time and without sufficient grounds in chronic nephritis, and even in that case it should be suspended if indications of serious albuminuria develop and casts are found in the urine.

Technic for Absorbing the Carbon Dioxid in Confined Air.—A. Gréhant's (*Bulletin de l'Académie de Médecine,* Paris) previous communication on this subject of regenerating vitiated air was mentioned in these columns on page 390. He shut up a dog in a cylinder and in four hours found that the air in the cylinder contained 127 times as much carbon dioxid as pure air, and in eight hours 185 times as much as pure air, or 5.5 per cent. The next day he repeated the experiment, but connected the cylinder with his apparatus for absorbing the carbon dioxid. At the end of two hours the air in the cylinder contained 6 times as much carbon dioxid as pure air; at the end of six hours, 5.6 times, and at the end of eight hours only 5.3 times as much. The proportion of oxygen in the air in the cylinder at the end of eight hours was 13.4 and 14 per cent. in these experiments. He thinks that the results obtained warrant the assertion that with his absorbing apparatus and a little extra supply of oxygen, it will be possible for human beings to breathe and to live even in absolutely confined air.



NURSES' RESIDENCE—THE HOSPITAL FOR SICK CHILDREN, TORONTO. *See page 53.*

The Canadian Journal of Medicine and Surgery

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Editorials.

1907.

"A hand to you—A health to you."

THE remembrance of the old-world custom of watching the old year out and welcoming in the new still lingers, and with it come back the words learned long ago, yet so expressive of the great memory waste-heap of plans and fancies that crowd each other at the dying of the year:

"Of the glorious ambitions,
Yet unquenched by their fruitions ;
Of the reading out the nights ;
Of the straining of mad heights ;
Of achievements, less descried
By a dear few, than magnified ;
Of praises from the many earned
When praise from love was undiscerned ;
Of the sweet reflecting gladness,
Softened by itself to sadness.—
Throw them in, by one and one !
I must laugh, at rising sun."

With the rising sun of the New Year, let us offer each to other, united by the bonds of a common life-work, in the good old-fashioned way—"A happy New Year, and many of them."

So strenuous has life become now that a younger generation scarcely pauses to greet one another with "the compliments of the season to you," as the custom was when we were boys. At this gala season, a side action of the head, accompanied by a grunt voicing the words "Merry Chris," seems to be about the extent of the courtesy the young "hopefuls" extend to their associates. In the little sphere in which we cut a caper, the past year has been an eventful one. The plans for the new Hospital are completed. The beautiful new Convocation Hall of the University of Toronto is finished, a new wing added to the Western Hospital, arrangements made to enlarge Grace and St. Michael's Hospitals, the handsome Home for the nurses of the Sick Children's Hospital completed and occupied, and last, but by no means least, the plans for the new Morgue in paper pattern form, awaiting the clipping out of a few extra frills which add (so the City Fathers say) too much to the expense of the proposed building. Had we space to enumerate the many minor things accomplished in our obscure medical arena that lies within the extent of Toronto's city limits, perhaps the great world's M.D. and his wife might condescend to treat us as a bowing acquaintance.

The British Medical Association honored God's own country with its presence last summer. The meeting was a history maker, as yet unwritten, as so far all the Colonials are alive to tell the tale.

A bright and hopeful future lies before the Canadian physicians as 1907 dawns, a year, let us hope, to be distinguished for its progress and achievement. So

"Laugh, at rising sun."

W. A. Y.

THE RIGHT TO PRACTISE MEDICINE IN ONTARIO.

At Osgoode Hall, December 6, 1906, the Ontario Court of Appeal was asked to give judgment as to the construction of Sec. 49 of the Ontario Medical Act, which reads as follows: "It shall not be lawful for any person not registered to practise Medicine, Surgery or Midwifery for hire, gain, or hope of reward, and, if any person not registered pursuant of the Act, for hire, gain or hope of reward practises or professes to practise Medicine. Surgery or Midwifery, or advertises to give advice in Medicine, Surgery or Midwifery, he shall, upon a summary conviction thereof before any Justice of the Peace, for every such offence, pay a penalty not exceeding $100, nor less than $25."—R. S. O., 1887, c. 148, s. 45.

The question to decide was: Do the words "to practise medicine" in Section 49 mean to attempt to cure or alleviate disease by the use of drugs, etc., or do they include cases in which the remedy or treatment advised, prescribed or administered does not involve the use of drugs or other substances, which have, or are supposed to have, the property of curing or alleviating disease? The answer of the court is, that each case must depend or be determined on its own circumstances; but, dependent on the facts in each case, there may be a practising of medicine which does not involve the use of drugs or other substances having, or supposed to have, the property of curing or alleviating disease.

This is an important decision. Although a practice of medicine which does not include the use of drugs or other substances, having, or supposed to have, the property of curing or alleviating disease, is not mentioned by name, Osteopaths may be referred to, or the Church of Christ Scientist. Faith healing, under one name or another, is as old as the Gospels, perhaps older. It has lately attracted a good deal of notice in lay, clerical and medical circles under various names, such as hypnotism, mental healing, rest cures, Christian Science, and many other cults. Medical practitioners sometimes endeavor to influence the bodily sensations through the mind, and benefit is said to have been accomplished in some cases of emotional, traumatic, fatigue and malnutrition neurasthenia (Savill). Apart, however, from any partial or complete success

which may have been obtained by medical practitioners in such diseases, psychological methods of cure cannot be legally restricted to the medical profession, at least in a Christian country. Belief in a spiritual means of cure mingles with man's religious convictions; we do not think that courts care to meddle with it. Osteopathy is in another category. It is said to be "A system of medical practice founded on the assumption that many diseases are the result of morbid conditions of the bones and joints," and that treatment should be based on this view of their pathology. (See Dunglison's Medical Dictionary, 23rd edition, page 808.)

We would respectfully suggest that the prosecutor of the Ontario College of Physicians and Surgeons be instructed to secure evidence to frame concrete cases of violation of Sec. 49, O. M. A., by two osteopaths who are making a living by practising medicine in the northern part of Toronto. J. J. C.

DR. OSLER'S RECENT VISIT TO TORONTO.

Into the sacred privacy of home life we hesitate to enter, but pause just outside the door to offer to one in our profession, whom we delight to honor, congratulations upon the one-hundredth birthday of his mother, Mrs. Featherston Osler. Dr. William Osler, Regius Professor of Medicine at Oxford University, has again favored Toronto with a visit. Although as the guest of his relatives to participate in an unusually happy family gathering, he has, with his unfailing courtesy, responded to several invitations with evident pleasure. Dr. Reeve invited a number of physicians to meet Dr. Osler on the evening of December 15th, and amid the cosy surroundings of the Dean's home on Bloor Street a delightfully informal hour was spent. Professor Osler on the eighteenth unveiled a portrait of the late Professor James E. Graham, of Toronto, presented to the Medical Library by Dr. Joseph Graham, his only son.

In transferring so truthfully to canvas the familiar features of genial, wholesouled James E. Graham, Mr. J. W. L. Forster has succeeded, not wisely, but too well. For, as students who "learned of him," men who worked side by side with him, and those who knew him best and called him friend, one and all

feel the irony of it, that after all it is only a cold semblance of the man who ought to have been with us yet, so willing he ever seemed to help, and ever brighter because of the day's work. How true Professor Osler's remarks seemed to all present as he unveiled the portrait: "Dr. Graham was of a quiet, retiring disposition, achieving his successes without ostentation, by steady, faithful work. . . . He was one at whom the world did not fling its final insult, to a great man, of cheap popularity." . . . In speaking of the progress and expansion of his alma mater in Toronto, his rejoicing was mingled with regret when he remem-

bered old faces and old teachers who had passed away. "Naught may endure save mutability." Professor Osler concluded his address by saying, "We, his intimates, who knew best his sterling worth, can well leave that portrait of the benign, strong face, to keep green his memory here among the living, surrounded by the books he loved so well." Dr. Osler also addressed the Toronto Medical Society on the evening of December 18th, on "The Advantages of an Academy of Medicine," to which we hope to refer in a later issue. We voice the wish that often Dr. Osler may visit Toronto again. His welcome ever awaits him. Would that others among the distinguished members

of our profession might emulate Professor Osler's example, and come from across the border or over the sea and pay Toronto and its Medical Society an angel's visit. W. A. Y.

IS TYPHOID FEVER IN CANADA TRANSMITTED BY OYSTERS?

It is generally conceded that, under ordinary circumstances, typhoid fever is commonly transmitted by the drinking of unboiled polluted water; but that there is more than one indirect channel through which this sort of infection may exercise its deadly effects is also true. Thus typhoid infection has been clearly traced to the eating of raw oysters polluted with sewage.

An outbreak of typhoid fever which occurred at Wesleyan University, Hartford, U.S., in October, 1894, was traced by Professor Conn, of that institution, to polluted raw oysters. There were in all twenty-three cases; all the victims were men, there being no illness among the women students. It appeared, from the investigation made, that the college fraternities of the university had held their initiation meetings, and, at the ensuing suppers, oysters had been eaten. The incriminated oysters had been sold by one dealer at Hartford. The oysters had been brought from a bed in Long Island Sound, and on October 10, 1894, two days before use, had been stored in a bed at the mouth of the Quinipiac River, 300 feet from the outlet of a privy drain from a dwelling in which two persons lay ill with typhoid fever. A very interesting point in this admirably worked-out piece of evidence was that the typhoid infection in the manifestly polluted oysters was destroyed by cooking. Of the four college fraternities supplied by the Hartford dealer, one had eaten the oysters cooked, and its membership was not invaded. The trouble was sifted down to raw oysters from the local dealer.

Mosny (*Révue d'Hygiène*, January, February, March, 1900) reported that five members of a family of seven, living in a village in a suburb of Paris, in which there had been no case of typhoid fever in four years, were made sick after eating oysters sent to them from Cette. Four were seized in the evening of the following day with gastro-intestinal disturbance, which lasted

twenty-four hours. On the eighteenth day a youth of seventeen years developed unmistakable symptoms of typhoid fever, of which, nine days later, he died. In March, 1897, Chatin (*La Semaine Médicale,* 1897, p. 9), reported the case of a family, of which several members were stricken with typhoid fever after eating oysters from a bed which was contaminated by sewage.

The influence of the sewage of a city in effecting the contamination of oysters is shown by C. A. Fuller (*Science,* 1902, No. 375, p. 363), who collected samples of water and shellfish from various places in Narragansett Bay, into which about 14,000,000 gallons of sewage from Providence, Rhode Island, are discharged daily. Water, oysters, clams, and mussels, taken at a distance of a quarter of a mile from the sewer outlet, yielded Bacillus coli communis, Bacillus cloacæ, and Bacterium lactis aerogenes. The water and oysters from a bed two miles distant yielded the same organisms. Bacillus coli communis was found in 30 per cent. of the oysters, and in 60 per cent. of the samples of water from a bed situated in the line of a strong tidal current, five miles away; and in 40 per cent. of the oysters and 70 per cent. of the water samples from another bed in sluggish water, more than five miles away. One bed, six miles away, was found to be contaminated, but those further down than six and one-half miles were unpolluted.

From a series of experiments undertaken to determine the question of viability of the typhoid organism in sea water and within the oyster, Bordoni-Uffreduzzi and Zernoni (*Giornale della Reale Società Italiana d'igiene,* 1899, p. 500), concluded that it will live over two weeks in sea water and from three to four days in oysters, without lessening of virulence. After the outbreak at Wesleyan University it was shown by Foote, that typhoid cultures, introduced within the cells of the oysters from the bed from which the incriminated oysters were derived, were virulent at the end of forty-eight hours. Furthermore, he showed that, if the oysters were kept at 57 deg. F. the typhoid organisms were active as long as a month later.

In the investigation of outbreaks of typhoid fever supposedly due to oysters, bacteriological proof of typhoid infection of those eaten or of others from the same lot always has been and always will be wanting, since, long before the appearance of the first

symptoms of the disease, the material is no longer available for investigation. It is reasonable to think, however, that, as oysters have been sources of typhoid infection in the United States and other countries, they may continue to furnish fresh centres of typhoid infection. This is all the more probable, in the United States, because oysters are largely consumed during half of the year, and the sources of supply on the coasts of New Jersey and elsewhere are exposed to sewage contamination. For instance, the New York *Herald*, December 5, 1906, publishes the following from Derby, Conn.: "Miss M. A., and F. M. C., whose engagement was announced a short time ago, are both ill from typhoid fever at their respective homes in this city. The young couple, who are very prominent in society, were stricken simultaneously, and they exhibit the same symptoms. It is believed that they contracted the disease from oysters which they ate recently at a shore resort while on an automobile trip." The Canadian market for oysters is supplied almost exclusively from the United States. Some cases of typhoid infection in Canada may, therefore be caused in the way referred to here. This species of reasoning, we quite readily admit, is conjectural. It would not be difficult, however, to substitute facts for theories. The authorities of the Inland Revenue Department, Ottawa, have, repeatedly, issued valuable bulletins showing the physical condition of foods and drinks, their freedom from, or their possession of, deleterious qualities. An examination of oysters by the chemists of that Department would enable them to speak with authority on this question. If the chemists of the Inland Revenue Department object to an extension of their quest to the domain of bacteriology, the duty would then devolve on the laboratory of some one of the Canadian Provincial Boards of Health. The case may be put in this way: Either the American oysters sold in Canada are free from sewage pollution or not. If they are found to be free from sewage contamination, it will be a source of great gratification to the people; and if they are frequently found to be contaminated their use should be tabooed, or else the public should be told that oysters should invariably be cooked before being eaten.

J. J. C.

OURSELVES.

TEMPUS FUGIT! A decade has passed since The Canadian Journal of Medicine and Surgery made its bow to the medical world. It has kept the steady, forceful, yet ever aggressive policy which was the ideal of the medical journalism of to-day in the mind of its Editors at the time of its inception. Much was promised, and the tryst with its readers has, as far as possible, been kept. Our ideal has ever been a high one, and many a time discouragement has crept in, but has been overcome. True to our training, as good horsemen, a rider always jumps his fence in fancy ahead of his horse, and so without spur or whip, but only with determination and a steady purpose, have we led over every obstacle, and, thankfully we say, we have not yet, either editorially or financially, come our first cropper.

While we do not wish to indulge in a spread-eagle screech, nor yet cause the cock to crow thrice this wintry night, we assert—with the conviction that we speak the simple truth—that we publish one of the best, cleanest and most ethical medical journals in America. Long may we be able to reiterate this statement, and for ever and a day may our readers continue to believe it. Though we have taken clearly a very high note, this is not our "swan song."

W. A. Y.

CURABILITY OF CANCER IN GENERAL AND OF CANCER OF THE TONGUE IN PARTICULAR BY PRECOCIOUS OPERATION.

IN an article in *La Presse Médicale* (October 31, 1906) we notice that at a meeting of the Academy of Medicine, Paris, October 30, 1906, Dr. Poirier expressed some opinions on the curability of cancer in general, and particularly of cancer in the tongue. After recalling the complete failure of serum-therapy in all the cases of cancer in which it had been tried, and also the non-success of radio-therapy in the great majority of the cases of cancer, he reiterated the oft-expressed opinion, that cancer is curable by surgical means if the operation be done speedily and the removal of the neoplasm be free and sufficient. He contended that if the surgeons of Paris and the French Provinces were to unite in publish-

ing their statistics of cured cases of cancer, thousands of cures could be enumerated.

Confining his remarks to cases falling within his own experience, Dr. Poirier gave the following statistics of cancer of the tongue. Since 1901 he had operated on 32 cases of cancer of the tongue: seven patients died immediately; 1 on the fourth day after the operation. The majority of these cases exhibited enormous enlargement of the lymphatic glands; 11 cases relapsed speedily; 5 were operated on again, and 2 appeared cured after seven months. Eight patients remain cured: 2 for five years; the others for three years, two years, and one year and six months. Five of the patients have been lost sight of. In every case the diagnosis of cancer had been verified by a histological examination of the diseased tissues.

He said, "When one considers that all these cases were of exceptional gravity, the results are encouraging. To obtain a higher percentage of cures, surgeons should operate on cancers in the initial stage, and should not make the mistake of beginning the treatment of the neoplasm by a trial of antisyphilitic therapy, or by expectantly waiting for the appearance of enlarged lymphatic glands."

At the first suspicion of cancer a surgeon should resort to a biopsy; the diagnosis once established, he should immediately operate.

Operation should not be restricted to confirmed cancers; but the knife should be applied to obstinate leucoplasias (chronic inflammation of the tongue with whitish patches), which in Dr. Poirier's opinion are hotbeds of cancer. As soon as a practitioner finds that medical treatment fails to cure such manifestations, surgical treatment should be applied to them.

Dr. Poirier closed his highly interesting paper by reminding his hearers that cancer of the tongue is the outcome of nicotine and syphilis. Perhaps it would be more correct to say, that it is cancer appearing in a syphilitic subject, than to call it smoker's cancer. It is the cancer of syphilitic smokers.

In a letter published in *The Medical World,* Philadelphia, December, 1906, Dr. Ira Harris, Tripoli, Syria, says: "At our clinic I see three cases of cancer now where I saw one fifteen years ago; and the sad thing is, unless an operation is done early in the disease, and then radically, there is no use to operate; better let

the disease alone and use all our skill to make the patient as comfortable as possible. Twenty-five years ago, a famous English gynecologist was going to cure cancer with the use of Chian turpentine. His name alone gave confidence to hundreds of suffering women that he could cure them. Since then we have had 'Coley's fluid,' actinotherapy and radiotherapy with its X-rays, and radium that was to be the coming specific that would banish the cancer cell from the realm of pathology. But, alas, it was not to be; for, with only a very few exceptions those remedies have been found sadly wanting, and the knife, *used early,* is our best method; and were it not for the fear of an operation entertained by the patients who wait too long, it would be the only method used." The views of Dr. Poirier, of Paris, and Dr. Harris, of Tripoli, being indicative of the same ideal method of treatment in cancer, we have placed them in the same article. It would be well for surgery if each surgeon, who does an early operation for the removal of a real cancer, would, after a proper interval, publish his statistics in some medical journal. Were this practice commonly followed by surgeons, the merit of early operation in curing cancer would be widely diffused, and the objections of patients to an early operation would be materially lessened.

J. J. C.

CLOSING MEETINGS OF THE BRITISH MEDICAL ASSOCIATION COMMITTEES.

The different committees of the British Medical Association have held their closing meetings, and in each and every case have had reason for congratulation over the result of their work. The Committee on Exhibits have turned over the splendid sum of $3,714.03 to the Treasurer, Dr. J. F. W. Ross, a surplus which, we understand, holds the record of any meeting of the B. M. A. to date. We understand that any surplus the Executive may have, after paying all accounts, will be presented to the Ontario Medical Library Association for further improvements to the building, as well as the adding of a number of new volumes to the shelves.

It is now in order for the committees of the British Medical Association to agree with Rose Stahl when she said, "You cannot understand how nice it is to feel that there is nothing on your mind but your hair."

W. A. Y.

EDITORIAL NOTES.

A New Departure at the Toronto Asylum.—A new departure, which speaks well for the interests of the insane, is to take place at once at Toronto Asylum, and which will inaugurate a new era in connection with the Asylum duties. Dr. J. H. Fitzgerald, a graduate of Toronto University, who has spent the last two years in Baltimore pursuing psychiatric studies in the neurological and psychological clinics of Johns Hopkins and Sheppard and Enoc-Pratt Hospital, and who has also done considerable pathological research work, will assume the position of clinical director and pathologist at Toronto Asylum, and give his entire time to that particular department. This is certainly a step in advance, but nothing more than we would expect from Dr. C. K. Clarke, whose one desire seems to be to increase the efficiency of Toronto Hospital for the Insane (not Toronto Asylum) in every way possible.

W. A. Y.

Influence of the Automobile on Health.—At a meeting of the Therapeutic Society (Paris), Dr. Legendre said that the rapid displacement of air at the surface of the body of a person riding in an automobile produces a sensation of coolness due to vaso-constriction, which is followed by vaso-dilatation after the machine is stopped. Such modification of the circulation can influence some diseases of the skin. Thus Dr. Legendre has witnessed the cure of a rebellious pruritus as the result of riding in an automobile. In pulmonary diseases the effect of the automobile varies. Cases of empyema are improved, and some cases of nervous asthma also derive benefit from it. Tubercular patients with fever should not use it, but those with discrete tubercular lesions, not exhibiting a congestive tendency, may do so. Chlorotic patients derive benefit from it on the condition that the rides are so short as not to cause fatigue. The automobile is permissible in well-compensated cardiac cases, but should be forbidden to patients who have congestion of the lungs or liver. Patients with varicose veins cannot without inconvenience remain motionless in a sitting posture in carriages for a very long time. In diseases of the digestive tube the automobile improves sufferers from anorexia, gastralgia, chronic constipation, but should be forbidden to patients with ulcerative gastritis. In mucomembranous colitis

the effect of the automobile is variable, some patients deriving benefit from the good effects of diversion of attention from the disease, and an open-air life. Cases of albuminuria and, also, cases of uterine disease may use the automobile, if the lesions have no congestive tendency. Patients with slowness of the nutritive functions (gout, diabetes) are improved by exposure to the fresh air; but obese persons who ride much in automobiles after a while lose aptitude for walking and do not take enough exercise. Cases of nervous depression are improved, but excitable, nervous cases are made worse; besides, when people of the latter class run an automobile they have no moderation and may prove a source of danger to others. Epileptics and alcoholics should not ride in automobiles. Persons desirous of becoming chauffeurs should be obliged to pass a medical examination before beginning their business.

The Means of Prolonging Life.—H. Weber, writing in *Zeitschrift für physikalische und diätetische Therapie,* 1906, fas. 11 and 12, p. 613 and 617, says that in order to prolong life one must increase the resistance of the body. To accomplish this object he gives the following rules: (1) Maintain the organs and tissues of the body in full strength by daily open-air exercise, accompanied by breathing exercises and gymnastics; (2) Practise moderation in food and drink, as well as in physical pleasures; (3) Ventilate the dwelling freely, and pass as much time as possible in the open air; (4) Preserve, as completely as possible, the resistance of the body to disease and combat hereditary predispositions; (5) Go to bed early, rise early, sleeping six, seven or eight hours; (6) Make the skin work regularly by daily bathing and washing; (7) Strengthen the mind by regular mental work; (8) Cultivate sentiments of kindness, joy, tranquility of mind, and take a hopeful view of life; (9) Awaken the sentiment of duty in all the circumstances of existence, as well as a firm resolution to struggle for what is good, even in spite of misfortune; and avoid hurtful things, such as alcohol.

Alcohol an Antidote in Carbolic Acid Poisoning.—That alcohol is an efficient antidote for carbolic acid poisoning was again exemplified in a case of attempted suicide by carbolic acid, which occurred at Niagara Falls, Ontario, November 10, 1906. A

woman, who had been suffering from chronic melancholy, partook of alcoholic liquors freely on that day at the town of Niagara Falls, on the American side of the river. On her return to the Canadian side of the river she appeared to be intoxicated, and fell to the sidewalk. Those who went to her aid smelled carbolic acid, and called Dr. McGarry. By prompt measures she was revived. Her face, mouth and throat were badly burned. It was found that she had swallowed about an ounce and a half of the poison. This large quantity of carbolic acid would certainly have proved fatal to the woman had it not been that the alcoholic liquor in her stomach acted as an antidote. It is strange that authors on materia medica do not state this therapeutic point clearly and emphatically. After taking carbolic acid in a poisonous dose, a patient is rendered rapidly unconscious or may drop dead within a few moments, from paralysis of respiration. Alcohol is an efficient antidote to carbolic acid if given promptly. When applied locally it prevents the caustic action of pure carbolic acid.

Acute Suppurative Osteomyelitis.—Dr. Ochsner, New Orleans, in a paper published in the New Orleans *Medical and Surgical Journal*, shows that confusion sometimes arises between osteomyelitis and typhoid fever. Osteomyelitis is also confounded with tubercular or syphilitic diseases of the bone, but it is most frequently mistaken for acute rheumatism. Rheumatism is a polyarticular disease, different joints in the patient's body becoming simultaneously or successively involved. In rheumatism the joint swelling is usually found earlier than in osteomyelitis. Rheumatism is essentially a disease of the joint, and despite the fact that a joint affection is sometimes present in osteomyelitis, the degree of greatest sensitiveness in rheumatism would be in the joint and not in the diaphysis of the bone, near its epiphyseal end, as in osteomyelitis. The monarthritis of gonorrhea is cleared up by the history and bacteriological examination. The treatment of osteomyelitis consists in making an incision, under general anesthesia, through the point of greatest tenderness to the bone and then trephining the bone. With the escape of pus the opening in the bone should be enlarged with chisel or rongeur until the whole infected area is exposed. The wound in the bone should not be curetted, as thereby the integrity of the endosteum, so essential to repair, is destroyed. The epiphysis of the bone should not

be injured. Effusion into the joint, when it exists, is usually of a non-infectious character, and the joint should not be opened by the surgeon. The results of early operation in osteomyelitis are well summed up by Dr. Senn, Chicago, as follows: (1) The operation removes pain; (2) It enables the surgeon to remove the local cause of the disease completely or in part; (3) It prevents extensive necrosis of bone; (4) It is the best prophylactic measure against fatal septicemia or pyemia; (5) It prevents extensive destruction of the periosteum and the contiguous soft parts; (6) It cuts short the attack and expedites recovery.

The Treatment of Puerperal Sepsis.—Dr. Lewis McMurtry, Louisville, Kentucky, who, at the Toronto meeting of the British Medical Association, read a paper on Puerperal Sepsis, favored surgical interference, soon after the initial chill and rising temperature indicated the beginning of sepsis. His treatment was simple: evacuation of debris from the womb by the exploring finger of the obstetrician, aided by a warm saline douche. Unless in cases where this treatment failed he did not favor the use of the curette. On account of the obstetrician's inability to accurately determine the character of a puerperal infection and the extent of tissue involved, during the early stage of puerperal sepsis, Dr. McMurtry thought that hysterectomy, as an abortive measure of treatment, was impracticable. He also thought that antistreptococcic serum was valueless in puerperal sepsis. He said that puerperal infection, being identical with ordinary wound infection, should be considered from the standpoint of prevention, and, as sepsis had been eliminated from modern operative surgery, so should puerperal sepsis be reduced to the accident standard by the application to the practice of obstetrics of a refined surgical technic. During the discussion subsequent to the reading of this paper, the failure of antistreptococcic serum to cure puerperal sepsis was fully recognized by several speakers; curettage of the puerperal uterus was discountenanced by most of the speakers. Dr. Frederick Fenton, Toronto, drew a distinction between puerperal infection of the uterine cavity and the infection of some other part of the parturient canal. In cases in which involution of the womb was proceeding satisfactorily, thereby showing that

the womb was not infected, he thought it should not be explored, —the seat of sepsis should be sought for elsewhere. The distinction was well taken. Puerperal sepsis may originate in a lacerated vagina or perineum. It may be that such seats of infection, being easily discovered by the obstetrician, should speedily receive the preventive treatment, which obviates or mitigates puerperal sepsis.

Is Broca's Convolution the Seat of Language?—At a meeting of the Society of the Hospitals, Paris, October 19, 1906, Dr. Souques presented the brain of a young woman who had had aphasia. Her history showed that she had been a sufferer from stenosis of the mitral valve, and had been suddenly attacked with right hemiplegia and aphasia. Her aphasia had included all forms of language,—aphemia and agraphia predominating, so that in her case a diagnosis of Broca's aphasia was confidently made. Three years after her paralytic seizure the patient died of pleuro-pulmonary disease, of embolic origin. At the autopsy an area of softening was found in the left hemisphere of her cerebrum. This area occupied the posterior half of the two first temporal convolutions (Wernicke's sensorial zone). The third frontal convolution (Broca's centre) was intact. In a Flechsig section of the tissues of the brain, the integrity of the third frontal convolution was manifest. The area of softening affected the posterior convolutions of the insula, the posterior half of the temporal convolution, and extended to the postero-external part of the lenticular zone and the adjacent capsular region. This anatomico-clinical observation is at variance with the hitherto classical doctrine of motor aphasia. It agrees, however, with the new ideas of Pierre Marie, who denies that the left third frontal convolution of the human brain is the special seat of articulate speech. In a discussion which took place at the Society of Neurology, Paris, November 8, 1906, M. Pierre Marie denied that Broca's convolution (the foot of the F^3) played a role in aphasia. He contended that the anatomical proofs upon which Broca had relied in proclaiming his pretended discovery were of a very slight order. In aphasia, according to P. Marie, there are many degrees; if the lenticular zone alone is affected the patient does not speak, but his intelligence is only slightly affected,—the further the lesion extends posteriorly into Wernicke's zone, the

more do intellectual troubles develop (intellectual troubles as to the meaning of language). He believed that Wernicke's zone was the seat of a special intelligence, the intelligence of the meaning of language.

Rolled Oats and Oatmeal.—In Bulletin No. 127, issued by the Inland Revenue Department, the results of the examination of 155 specimens of rolled oats and oatmeal manufactured and sold in Canada are given. The microscopic examination and the percentage of crude fibre found are stated. "In only one case was any foreign starch (wheat) discovered; as regards crude fibre the percentage varied from 0.80 to 3.35 per cent. The latter amount is pronounced excessive, comparison being made with recorded analyses of American and European oatmeals. In the analyst's opinion 2 per cent. of crude fibre might be assumed to be the highest allowable limit." The report further says: "Among the 155 samples examined, 64 showed higher amounts of crude fibre than 2 per cent., and this would seem to indicate that, with regard to 41.3 per cent. of the oatmeal samples now offered for sale in Canada, the quality might be improved. At the same time, none of the samples of oatmeal examined were found to contain the large amounts of oat hulls originally complained of, and, in the absence of any standard, it is impossible to characterize any of the samples as adulterated." Intestinal concretions, composed of phosphate of lime, agglutinated animal matter, and fragments of the husk of the oat, were formerly common as the result of the habitual consumption of oatmeal food. In oats the husk amounts to from 22 to 28 per cent. The remaining 72 to 78 per cent. comprises the kernel of the seed. From the data given in Bulletin No. 127, it appears that increased efforts should be made by Canadian oatmeal millers to secure a more thorough removal of the hull of the oat from the kernel and its subsequent exclusion from the oatmeal. J. J. C.

PERSONALS.

Dr. F. Reid Simpson, who returned in the spring after spending two years in Vienna and London on special work, has located at 82 College Street, Toronto, and will devote himself to diseases of the eye, ear, nose and throat.

Obituary

DEATH OF DR. HENROTIN, CHICAGO.

Dr. Ferdinand Henrotin, for twenty-five years one of Chicago's most eminent physicians and surgeons, and President of the Policlinic Hospital, died of heart disease on Dec. 9th at his home in that city. He was considered one of the nation's most eminent authorities on the pelvic cavity. Much of his service has been of a public character. Dr. Henrotin was born in 1847, in Brussels, Belgium.

DEATH OF DR. W. D. CLEMENT.

Dr. Walter Duesler Clement died on December 11th, at his home, 62 Tranby Avenue, in this city. The deceased was in his 76th year, and was well known in Oxford County, where he practised medicine for forty consecutive years. At the age of twenty-four he began practice in Innerkip, Oxford County, and remained there until thirteen years ago, when he moved to Woodstock. He retired from practice when he came to Toronto three years ago. Dr. Clement was a fellow student and graduate with the late Dr. James Thorburn, of Toronto, and Dr. Woodruff, of London, Ont. He leaves three daughters and one son, L. P. Clement, of Didsbury, Alta. His wife predeceased him ten years ago. Mr. W. A. Clement, travelling representative for Lyman Brothers, is a brother of the deceased. Interment took place at Woodstock.

News of the Month.

THE CITY'S NEW MORGUE.

The new city morgue, to be erected on the north side of Lombard Street, west of the fire hall, will be an up-to-date building. The structure will occupy a lot which has an area of 104 feet by 90. The building itself will have a frontage of 58 feet by a depth of 46 feet, and will be two stories in height.

The ground floor will contain a main hall 11 feet in width and an identification room 21 feet wide and 24 feet long. The autopsy room on the same floor will have an area of 16 by 21 feet. The office of the chief coroner and the identification room will be in the front of the building. The autopsy room will be behind the identification room.

On the first floor in front will be a court room 40 feet in length and 21 feet in width, also a jury room and separate rooms for male and female witnesses.

The ambulance station which will be erected at the rear of the lot will be 63 feet long, one portion, 29 feet in length, being 26 feet in width, and the balance 19 feet in width. This will contain waggon house, with accommodation for two waggons, harness room and stabling for three horses on the ground floor. On the first floor will be a hayloft and a room for accommodation of the caretaker.

The cost of the morgue will be $30,000, and the ambulance station $4,500.

MEDICAL COUNCIL ELECTIONS.

In West Toronto Dr. J. S. Hart was elected with a small majority over Dr. A. A. Macdonald, who has represented this riding for a period of years. Dr. B. L. Riordan also ran in this division. Dr. Hart was born in Wilfrid, in the county of Ontario. His preliminary education was received at the Port Perry High School, and he is a graduate in Medicine of Victoria and Toronto Universities. He passed in his third year, 1888, at Victoria, taking the "Council" and Toronto the following year. Dr. Hart is one

of the staff of the Toronto Western Hospital, also of the Home for Incurables.

Results of the voting in several districts for the candidates for the Medical Council of Ontario have been announced in the ninth electoral division, where Dr. R. J. Gibson, of Sault Ste. Marie, was the winner of the contest. In the second division Dr. J. H. McCormick, of St. Thomas, was elected.

THE CRICHTON CASE BEFORE JUDGE BOYD.—JUDGMENT RESERVED.

The argument in the appeal of Dr. Alexander Crichton from the action of the Medical Council in striking his name off the roll of medical practitioners concluded two weeks ago before the Divisional Court. Mr. H. S. Osler, K.C., on behalf of the Medical Council, resumed his argument, explaining that the second clause of the Discipline Committee's finding was not a second charge. It was an explanation, rather, that the circular was an attempt to impose on the credulity of the public for personal gain.

"If he is an honest man, and believes in his own preparation, how can this circular be an attempt to impose on the credulity of the public?" asked Chancellor Boyd.

"It may not be a fraudulent attempt, merely an absurdity, but that does not improve the case," replied Mr. Osler; "a test would not advance this matter. The preparation may be some good in some cases, but it is impossible to make an absolute cure. He says positively his medicine cures grippe in two hours."

Mr. Osler argued that a medicine in the hands of an unskilled person might be very harmful. The more efficacious the medicine the more harm it might do if so used, and no medicines for such diseases should be used without professional advice. Dr. Crichton was lending the weight of the medical profession to his advertising, and using his standing obtained under the Council for furthering his own interests, which are now judged by the Council to be unprofessional. This, he claimed, would bring the medical profession into disrepute if carried to any extent, and if the Court found the Medical Council was not justified in striking off Dr. Crichton's name, then it would deal a heavy blow to the medical profession.

"You must censure him for advertising goods that may be meritorious," remarked Chancellor Boyd. "Those testimonials bear out that it is meritorious. Does Dr. Crichton run down his fellow-practitioners?"

"No," answered Mr. Osler, who then continued to argue that

Dr. Crichton's advertising would be the same as for a solicitor to advertise his success in winning cases.

"If a solicitor were to gather testimonials from big corporations and prominent persons, showing he had won many cases, then that solicitor would be justified in advertising himself by sending out circulars, just as much as could be a doctor. No legal man would wish his profession to be brought into disrepute this way. I venture to say such a solicitor would be censured."

"He would be censured, but not struck off the roll," observed the Chancellor.

"Yes, I venture to say his name would be struck off the roll," replied the counsel.

Mr. Osler proceeded to point out that disastrous results would follow if every practitioner were allowed to advertise his medicine indiscriminately. He claimed the use of medicinal preparations by all classes of people for different diseases would be dangerous.

"This man has been going on for three years," said the Chancellor, "and no discovery has been made that any such harm as you mention has been done."

"The Medical Council should be the body to decide, however," said Mr. Osler, "as to whether such a course were disgraceful and should be discontinued."

"Is it not the inevitable result that the profession would be brought into disrepute?" asked the counsel. "I don't think it is necessary for a man to think he is doing wrong while he is doing wrong."

"If a man does something disgraceful, does not his mind take part?" asked Mr. Justice Magee.

In reply Mr. Osler said he might wrong the profession and yet be acting within his own conscience; but that fact did not justify the court in ruling that the Council should not have found him guilty of disgraceful conduct in a professional sense.

Mr. Justice Mabee then raised the point as to whether the Council acted in a judicial manner, and read the evidence taken. Mr. Osler replied they determined all points from evidence taken. They treated cases judiciously. Mr Kerr interjected that the Council were supposed to read the evidence. They had not done so, on the advice of Mr. J. W. Curry, K.C., but had acted on the report of the Discipline Committee.

Mr. Osler then continued, and said in no case did the Council ever act hastily or in a vindictive manner.

"The man is charged with mere advertising," observed Mr. Justice Mabee.

"Yes, but they find him guilty of an attempt to deceive," said the Chancellor. "Why did not the Council put in such a charge?

If people are satisfied to swallow the preparation whether it cures through the action of the mind or not, then it is a matter for legislation if you want to prohibit the sale."

"Well, my Lords, if the action of the Council is overthrown in this matter, the whole foundations are shaken of—"

"We had a case the other day in which it was argued we would shake the whole foundations of things, but they seem to be still going on just the same," broke in the Chancellor, to the amusement of the court.

"Supposing," said his Lordship again, "a reputable friend of yours told you, Mr. Osler, a bottle of this medicine would do you good, would you not put it to the test?"

"No, my Lord, I would not," answered the counsel.

"Well, if a friend told me such a thing, and I had good reason to believe him, I would probably get a bottle the next day and try it. That's a matter of common sense."

Mr. Osler told the court that if Dr. Crichton would stop his advertising, no doubt his name would be restored.

Mr. Justice Magee remarked on the idea of sending out one medicine for all diseases. It did not look reasonable to him.

Judgment was reserved.

DIVISIONAL COURT ALLOWS APPEAL OF DR. CRICHTON.

The Divisional Court has given judgment in the appeal of Dr. Alexander Crichton, from the ruling of the Medical Council, striking his name from the rolls for "disgraceful and infamous conduct," in a professional way.

The Divisional Court allows his appeal and restores his name without prejudice to the question whether on a subsequent enquiry there may not be proper ground for erasing his name.

Dr. Crichton is not allowed costs, as the Court holds that the Council discharges a quasi-public duty.

The doctor was charged with advertising in an unprofessionally flamboyant manner a remedy of his own concoction for the cure of various ills to which frail humanity is heir. The case was argued before Chancellor Boyd and Judges Magee and Mabee, and they all agreed on the finding.

Mr. H. S. Osler, K.C., argued the case for the Medical Council.

NURSES' RESIDENCE, THE HOSPITAL FOR SICK CHILDREN, TORONTO.

The Nurses' Residence, erected, furnished and presented to the Hospital by Mr. J. Ross Robertson, at a cost of about $120,000, is situated at the south end of the grounds in connection with the hospital, and between La Plante Avenue and Elizabeth Street.

It has a frontage of 150 feet by a depth of 48 feet, and is built of red brick in colonial style of architecture, and is five stories in height, exclusive of the basement.

The building is commodious and ample for the requirements of the Hospital for the next twenty years.

The basement is as light and bright a floor as the upper floors of the building.

The basement contains on its east side a refrigerator and cold storage room, a scullery, and necessary storerooms for the kitchen.

It has also a modern diet kitchen, in which nurses are taught special diet work as well as general cookery.

In the centre of the basement is a demonstration room, 40 by 30, where nurses are taught ward work during their probation period, and before they enter the wards of the Hospital.

On the west side of the basement is a large plunge bath, 35 by 14, with shower bath and dressing room, next a sewing room, and on the north side of the corridor two large trunk rooms, vacuum sweeper room, and elevator room, while under the front of the centre of the building is the boiler plant, furnishing the building with heat and hot water.

No brooms are used in the building. It is swept by the vacuum process.

The centre part of the ground floor is devoted to a large lecture hall and reception room, and adjoining it on the east is the general dining room, a serving pantry, and the kitchen and cooks' pantries.

To the west of the reception hall is the parlor, music and writing rooms, a library of general literature, a lecture room, a waiting room and lavatory.

The first floor has twenty bedrooms, each 9 by 16, with two bathrooms, in which there are two tubs each, one for every five nurses on the floor. There is also a parlor in the south centre of the floor for the nurses, and a bedroom and sitting room for the Superintendent.

The second floor is laid out like the first floor, with twenty bedrooms, but it has in addition a medical library, which is exclusively for the use of nurses in training, and on this floor are also

rooms for the Assistant Superintendent, the Housekeeper, and the Supervisor of Nurses.

The third floor is also for nurses, and contains twenty-four bedrooms. This floor is laid out the same as the two previous floors.

The fourth floor has twenty-one rooms for domestics, and has bathrooms and other conveniences.

In the centre of the fourth floor is a room, 45 by 33, fitted up as a gymnasium for the nurses. This room is used for thirty minutes in the morning and evening, when the nurses are given instruction.

A narrow stairway leads to the roof garden, a flat space of 45 by 33, where, during the summer time, nurses may sit and rest when their day's labor is over.

It must be remembered that during the summer months the nurses have their turns at the Lakeside Home on the Island, but there are always about ten nurses at College Street, and these have to have fresh air and rest in hot weather, such as we had in last August, for example.

There will be, in fact are now, forty-five nurses, including probationers, in the Hospital. A large amount of heavy work is required of these women, and to do this work and be in perfect health they must live under the best sanitary conditions, with good food, well-ventilated rooms, and up-to-date methods, by the aid of baths, gymnastic exercises, and physical instruction, so that they may not only be in the best of health during their stay in the Hospital, but when they go out to labor in the nursing field they will do so under the best possible condition.

This is a brief description of the Residence for Nurses, built for the Hospital for Sick Children. It will be formally opened early in this month.

THE ANNUAL REPORT OF THE LOCAL BOARD OF HEALTH OF LONDON, ONT., FOR 1906.

The annual report of the local Board of Health of London, Ont., for 1906 is as follows:

London, Ont., Nov. 30th, 1906.

To His Worship the Mayor and Aldermen of the City of London:

Gentlemen,—In accordance with the requirements of the Ontario Public Health Act, I herewith beg to submit a report of the work done by the Board of Health during the past year.

Re Smallpox.—One suspicious and two bona-fide cases of smallpox came under our supervision, with the following histories:

On January 15th, a married woman who had been visiting an infected district in Bruce County, developed the disease. As we had no building in which to isolate her, and she was in such a delicate state of health that detention in a tent was inadvisable, we left her in her own residence, and in due time she fully recovered.

On April 16th, a case of scabies, which in many points resembled an early case of smallpox—and was so diagnosed by more than one experienced party—was isolated in a tent and detained for six or more weeks until thoroughly cured.

Also during April, owing to the absolute need of a storage building for smallpox supplies being immediately provided, it was unanimously agreed by the Board of Health to put up a two-story building which would also accommodate a few patients, and before its completion the wisdom of the action taken was clearly shown, as another severe case of the disease broke out in a traveller just returned from Winnipeg.

The premises are now complete and well equipped.

Re Ice Supply.—We regret that none of the present sources provide pure and safe ice for domestic use, though for cooling purposes only they may safely be used. Means should be adopted either to purify some of the local ponds, or import a pure product from, say, Lake Huron, or establish a plant for the artificial manufacture of domestic ice.

Carling's Creek.—The system of precipitating tanks for the refuse wash waters, etc., at Hyman's Tannery, which was to be introduced early this year, has not been completed, and the partial plant that they have put in is not running satisfactorily and is only intermittently used.

Within the last ten days serious complaints have again been made, and strong steps will have to be taken to compel the entire and complete removal of this long-standing nuisance.

Re Deportation of Immigrants.—After considerable correspondence with the Department of Immigration, Ottawa, regarding a widow and two children who were suffering from tuberculosis and likely to become public charges, and who had been in the country less than six months, the family were returned from whence they came at the expense of the railway and steamship companies that had transported them, as required by the law of Canada respecting immigrants.

At the present time the case of an epileptic, who has been in this country less than two years, is under consideration as to deportation.

Re Tuberculosis.—Your Board was well represented at the annual meeting of the Canadian Association for the prevention of consumption and other forms of tuberculosis, and are pleased to report that the active steps taken in various centres are materially

lessening the spread of contagion, and prolonging the lives of those suffering from this dreadful disease.

The general consensus of opinion is that if tubercular patients were cared for in sanitariums where proper hygienic and dietetic principles could be carried out, very many of them would recover and again become useful citizens.

Re Milk Supplies.—The inspection of dairies and herds has been regularly and efficiently done by our Veterinary Inspector, Dr. Tamlin, and though many samples of milk have been sent to the Medical Health Officer for examination, we have yet to discover any serious infraction of the regulations.

Great difficulty has been encountered in keeping track of the names of those peddling milk and the source from which they derive their supply, as we have no regulation to compel dealers, when they commence peddling, or change from one wholesale dealer to another in the purchase of supply, or when they dispose of or purchase a milk route, to report. Some such regulation as is adopted by that model municipality, Westmount, Quebec, should be adopted, and it is sincerely hoped that the Provincial Board of Health, in the revision of the regulations *re* dairies, etc., which is now under consideration, may fully deal with the matter.

In January we requested the postal authorities at Ottawa to permit the free transmission of notices to the Health Office of Contagious Diseases, as it was of the utmost importance that in the interests of the Public Health we should receive the notification at the earliest possible moment, and many of the medical attendants objected to pay postage thereon. Our request was refused.

I am pleased to report that the several Officers and Inspectors have most promptly and efficiently performed their duties during the year. Respectfully yours,

W. M. English,
Chairman, Board of Health.

The Physician's Library.

BOOK REVIEWS.

Elements of Practical Medicine. By Alfred H. Carter, M.D., M.Sc., Fellow of the Royal College of Physicians, London; Professor of Medicine, University of Birmingham; Senior Physician to the Queen's Hospital, Birmingham; Emeritus Professor of Physiology, Queen's College, Birmingham; Consulting Physician to the Corbett Hospital, Stourbridge; the Bromsgrove Hospital; the Smallwood Hospital, Redditch; and Guest Hospital, Dudley, etc. Ninth edition. London: H. K. Lewis, 136 Gower Street, W.C. 1906. Price, 10s. 6d.

This is a convenient little volume to handle. One can look up the essentials of any disease quickly, and feel that it contains all that is essential for practical purposes. The work is divided into ten sections covering the whole range of medicine, including skin diseases. It is designed as an elementary introduction to the study of medicine, and as such is a decided success, as evidenced by its having run through eight previous editions. As an example of the scope of the work, Acute Pneumonia occupies six pages, Appendicitis four pages, and Acute Pericarditis three pages. The articles, although short, include Morbid Anatomy, Symptoms, Diagnosis, Prognosis and Treatment. It is a first-class work for a rapid review of the essentials as well as an elementary introduction to medicine. There are 614 pages. W. J. W.

Atlas of Typical Operations in Surgery. By Dr. Ph. Bockenheimer and Dr. Fritz Frohse. Sixty illustrations from water colors by Franz Frohse (artist), Berlin. Adopted English version by J. Howell Evans, M.A., M.B., M. Ch. (Oxon.), F.R.C.S. (Eng), demonstrator of Operative Surgery, St. George's Hospital, London. New York: Rebman Company, 1123 Broadway. London: Rebman Limited, 129 Shaftsbury Ave. Canadian Agent, Mr. Wingate, c-o J. F. Hartz Co., Toronto. 1906.

It is peculiar that in a magnificent work such as the one before us, the first few pages should be besmirched with cuts of instruments, apparently from an instrument catalogue, some of which are already out of date.

With this criticism one now proceeds to view one grand pro-

cession of climaxes in the art of illustration grouped together in the best possible style of bookmaking.

Of course the student or young surgeon in perusing these pages must bear in mind that certain structures disappear from the plates, merely for the purpose of the demonstration of deeper lying structures—otherwise were we to follow the plates too accurately he would meet with difficulty in closing his wound for want of tissue. This must, of course, occur, but if he studies the illustrations carefully in conjunction with the text he will save much valuable time; and many mistakes, such as suggested, will not occur.

In the operation "herniotomy" of course no sane surgeon would think of making an incision from over the internal ring to the bottom of the scrotum as illustrated, first because it is unnecessary and second because of the danger of infection of the wound from the skin of the scrotum. Nor do we agree with the text, namely, that in tying off omentum, catgut should be used and each catgut suture secured by a silk stitch. Now, if one is using catgut why add to the risk of infection by using silk?

Personally we would not care to have our hand and forearm opened up as depicted in plate XXV., but then such is not likely for we don't live in Germany.

The work is beautifully prepared and while one cannot agree with all the detail we can admire to the full the excellent work done and the magnificent result obtained. F. N. G. S.

The Theory and Practice of Medicine. By Frederick T. Roberts, M.D., B.Sc., F.R.C.P., Fellow of University College, Emeritus Professor of Medicine and Clinical Medicine at University College, Consulting Physician to University College Hospital, and to Brompton Hospital for Consumption and Diseases of the Chest; Ex-President of the Medical Society of London; Ex-censor, Lumleian Lectures and Harveian Orator at the Royal College of Physicians of London; Formerly Examiner in Medicine for the Conjoint Board, University of London, Victoria University and Oxford University; Fellow and Member of various Societies, etc. In two volumes. Fourth Edition. London: H. K. Lewis, 136 Gower Street. 1905.

A study of this treatise impresses one favorably. The style is clear and direct, so that the reader does not remain in doubt as to the author's meaning. In many instances, one is satisfied with the complete accuracy of the author's observations, as, for instance, when he traces neuritis, in certain cases, to gout.

As the etiology of a disease is placed in its true light, sometimes with startling suddenness; the latest teaching of medical

science respecting it may not appear in a work on the practice of medicine. For instance, a delay of a few months in publication would, probably, have impelled Dr. Roberts to reword the paragraph on the etiology of Malta fever (p. 350).

On the other hand he refers briefly, at page 442, to a disease which is not even mentioned by leading authors on medicine, viz., pyorrhea alveolaris. This disease, as a probable factor in the production of dyspepsia, certain functional neuroses, toxic neuritis, and other phenomena, is now being studied by clinicians.

The Chapter which, in the ninth edition of this work, was devoted to diseases of the skin, is properly omitted in the present edition. No reference is made to leprosy. A most trustworthy authority for student and practitioner. J. J. C.

The Roentgen Rays in the Diagnosis of Diseases of the Chest. By Hugh Walsham, M.A., M.D. (Cantab.), etc., and G. Harrison Orton, M.A., M.D. (Cantab.), etc. London: H. K. Lewis, 136 Gower Street, W.C. 1906.

This book of eighty pages is a very interesting contribution to the method of using Roentgen rays and their application to diagnosis of diseases of the chest. The rays in the hands of an expert often afford the greatest possible assistance in doubtful cases. To get such assistance, however, it is necessary not only to have the aid of an expert, but also of a thorough equipment. A. M'P.

The Practical Medicine Series, comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology, and Rhinology, Chicago Post-Graduate School. Volume VI., General Medicine, edited by Frank Billings, M.S., M.D., head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago; and J. H. Salisbury, M.D., Professor of Medicine, Chicago Clinical School. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

This volume is one of a series of ten issued at about monthly intervals, being complete for the year prior to its publication on the subject of General Medicine. The special conditions considered in this volume are the fevers, diseases of the stomach, intestines, liver, pancreas, peritoneum. This arrangement into several volumes enables those interested in special subjects to purchase only the parts they desire. It is replete with the very latest research work and opinions of the most prominent scientists of all countries, thus saving hours of labor in the library hunting up this information.

Volume V. of the series that we have the pleasure of reviewing

takes up the subject of obstetrics and is edited by Joseph B. DeLee, A.M., M.D., Professor of Obstetrics, Northwestern University Medical School, with the collaboration of Dr. Roehler, M.D., and Herbert M. Stowe, M.D. These editors divide this subject into four parts: 1st, Pregnancy; 2nd, Labor; 3rd, Puerperium; 4th, The New-Born. Our attention is directed especially to the practical side of the question more than the scientific, as little advance has been made in the latter during the past year. The question of eclampsia, Zweifel's discovery of lactacidemia in eclamptic mothers and their children, are duly considered; operative obstetrics receives thorough attention, also the surgical treatent of puerperal infections has been dealt with at some length. Nothing *new,* beneficial or otherwise, has escaped mention.

Volume IV. of this series takes Gynecology as its subject for discussion, and is edited by Emilius C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago; and C. von Bachellé, M.S., M.D., Gynecologist of the German Hospital, Chicago. We find here presented a résumé of many *new* and useful additions to the literature of gynecology. Much good work has been recorded on carcinoma, radical operations on which are falling into disrepute. Great stress is laid upon the early diagnosis of cancer. The several new plastic operations are reported upon, and the work done on ovarian transplantation is fully discussed. The happy arrangement of the subjects makes it pleasant reading, and what has been said of the two preceding volumes applies equally to this one, and they are an excellent means whereby the general practitioner can keep abreast of the times.

W. H. P.

Obstetrics for Nurses. By Joseph B. DeLee, M.D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. Second revised edition. 12mo of 510 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1906. Cloth, $2.50 net. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

Dr. DeLee might well feel gratified at the reception accorded the first edition of his capitally written book, "Obstetrics for Nurses." It is, first and foremost, practical, something absolutely essential in a book for daily reference on the part of nurses. It is freely illustrated, another point that adds materially to its value. It is also printed on the very best of paper, a point not to be overlooked. The second edition is better than the first in many respects, the different sections having been brought up to date and a number of illustrations added. The work is not only a good one for nurses, but also should be very useful to medical students and young practitioners.

W. A. Y.

Golden Rules of Medical Evidence. By Stanley B. Atkinson, M.A., M.B., B.Sc., of the Inner Temple, Barrister-at-Law; a Justice of the Peace for the County of London; Honorary Secretary of the Medico-Legal Society (London). "Golden Rules" Series, No. XVI. Bristol: John Wright & Co. London: Simpkin, Marshall, Kent & Company, Limited.

This little book, although arranged apparently in accordance with the requirements of the courts in England, is full of valuable suggestions, and could be read by every medical practitioner probably with benefit. The advice contained in it is particularly good.

A. J. J.

A Text-Book of Histology. By Frederick R. Bailey, A.M., M.D., Adjunct Professor of Normal Histology, College of Physicians and Surgeons; Medical Department, Columbia University, New York City. Second and revised edition, profusely illustrated. New York: Wm. Wood & Company.

In this edition the author has followed the original plan and scope of the text-book. He has made changes and additions to the chapter on the nervous system, some necessitated by the marked advances which have been made in neuro-histology during the past two years, others to further facilitate the teaching of the subject. Many new diagrams have been added to this chapter, showing the cerebellar connections, the optic nerve and its connections, etc., which should prove an aid to both teacher and pupil. The popularity of the work in the past has been due, no doubt, to the concise and yet clear text, and to the fact that the more essential elements stand out from the necessarily accompanying details. The highest praise is due to the publishers, William Wood & Company, of New York, for the excellent style in which their portion of the work has been carried out.

W. H. P.

Atlas and Text-Book of Human Anatomy. Volume I. By Professor J. Sobotta, of Wurzburg. Edited, with additions, by J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy at the University of Michigan, Ann Arbor. Quarto volume of 258 pages, containing 320 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company. 1906. Cloth, $6.00, net; half morocco, $7.00, net. Canadian agents: J. A. Carveth & Co., Toronto.

Next to the actual study of the cadaver in the dissecting room, there is nothing so helpful to the student of anatomy as a good atlas, where by carefully executed colored plates the different dissections of the human body are shown. A work on human anatomy is largely worthless unless profusely illustrated, and, if possible, in colors. Professor Sobotta's atlas is one of the best

that has come under our notice. The delicate coloring is beautiful. We have rarely seen a more beautiful piece of color printing than Figs. No. 101, 102 and 103, the section of the skull showing the turbinated bones, cribriform plate, sphenoidal sinus, etc. On the other hand, the deep coloring of some of the plates showing the muscles is decidedly exaggerated. Another most creditable piece of work will be found opposite page 140, illustrating the ligamentous attachment of the bones of the feet. Dr. J. Playfair McMurrich is deserving of congratulation on the excellence of the book, on the title page of which he appears as editor.

W. A. Y.

A System of Clinical Medicine, dealing with the Diagnosis, Prognosis and Treatment of Disease, for Students and Practitioners. By Thomas D. Savill, M.D. (Lond.), Physician to the West End Hospital for Diseases of the Nervous System; Physician to St. John's Hospital for Diseases of the Skin, London; Formerly Medical Superintendent of the Paddington Infirmary; Medical Officer of the Paddington Workhouse; and Post-Graduate Lecturer to the London Post-Graduate Association; Assistant Physician and Pathologist to the West London Hospital; Examiner in Medicine and Clinical Medicine in the University of Glasgow, and Medical Officer to the Royal Commission on Vaccination. Vol. I. Local Diseases and Microbic Disorders. London: J. A. Churchill, 7 Great Marlborough Street. 1903.

Only a practitioner who has had some literary experience can form an adequate idea of the labor involved in preparing a really useful book on clinical medicine. In reference to his method Dr. Savill says: "It is a positive rather than a negative process, for by carefully considering the various causal diseases which may be in operation, and balancing the evidence for and against each, the physician is guided, not to the least improbable, but to the most probable diagnosis." He does not, therefore, reach a diagnosis by a process of exclusion. Each chapter of the work is divided into three unequal parts. Part A treats of the symptoms, the fallacies incidental to their detection, and their causes. Part B treats of the physical signs of disease, and the methods used to elicit them. Part C classifies the various maladies affecting the region involved, and a summary of the routine procedure to be adopted, and this is followed by a series of sections dealing with the several diseases, arranged according to their clinical relationships.

This method of studying disease is logical, should work well in practice and should likewise save a practitioner much time and a good deal of fruitless thought.

After studying the list of symptoms of a disease and their

causes, in Part A, and examining his patient (Part B), the practitioner will find in Part C italicised paragraphs which serve as "a clinical index of diseases." "By following this he will shortly find himself reading a description of the diagnosis, prognosis and treatment of the disease from which his patient is probably suffering; while adjacent to this are the disorders which clinically, and very often pathologically, resemble it, and for which in practice it is apt to be mistaken."

The author's style is simple, direct and uninvolved. He has acted wisely in dividing his work into two handy volumes, instead of issuing it in one large one. J. J. C.

Bob Hampton, of Placer. By Randall Parrish. Toronto: William Briggs. Cloth, with illustrations.

A story of the great West, true to nature and a mining town, the kind of tale a man can read and enjoy; spice, action and a laugh here and there; the book for a winter night, with a havana and gran'ther's old arm-chair, and the world asleep. W. A. Y.

A Guide Book to Diabetic Cookery. By Frederick James, M.P.S. (Great Britain). Published by Callard & Co., 74 Regent St., London, England.

This is a very practical little book, and written by a man who understands what he is talking about. It is of considerable interest to medical men and will be found by them to be full of hints as to the dietetic treatment of diabetes. Any physician can procure a copy for the asking from Messrs. The Lloyd Wood Co., Ltd., Toronto.

The Masters of Fate. The Power of the Will. By Sophia P. Shaler. New York: Duffield & Company. 1906. Price, $1.50 net. Postage 10 cents.

This work is an inspiration for parents who have children with physical defects, and also a justification for the strenuous effort of modern medicine to save the weaklings. Here the nervous invalid, the maimed and the blind receive wonderful encouragement. Among the blind are mentioned such distinguished names as Milton; Homer; Francis Huber, the botanist; Prescott and Parkman, the historians; Fawcett, the late Postmaster-General of Great Britain; Laura Bridgman, and Helen Keller. Among nervous invalids are mentioned Gray, Pope and Louis Pasteur. As examples of unpromising children we find Victor Hugo, Sir Isaac Newton, Daniel Webster and John Flaxman. The book contains fourteen chapters—355 pages—and deals with Retarded Development, Effects of Imagination, Will and Habit, Management of

Mind and Body, Family and Social Relations of Invalids, Invalidism and Intellectual Development, and Accidental Malformations. Numerous examples of well-known individuals from the various classes are given, with short sketches of their life and work. It is a very interesting and inspiring book, both for physician and patient. W. J. W.

Syphilology and Venereal Disease. By C. F. Marshall, M.D., M.Sc., F.R.C.S.; late assistant surgeon to the Hospital for Diseases of the Skin; formerly house surgeon to the London Lock Hospital; Surgical Registrar to the Hospital for Sick Children, Great Ormond Street, etc. London: Baillière, Tindall & Cox. Canadian agents: J. A. Carveth & Co., Toronto, Ont. Price, $3.00.

It must now be a number of years since any work has come from the English press on syphilology and allied subjects. For that reason alone the volume, now on our desk, and which we have carefully looked over, should be most acceptable and have a ready sale. The pathology of syphilitic infection has for ten years or so been the subject of special study in the different laboratories in Germany, and a great deal of valuable information gained thereby.

The author has gone into a good deal of detail regarding the syphilitic origin of general paralysis, paternal heredity, parasyphilis, the transmission of syphilis to the third generation, and syphilis as a factor in the causation of Bright's disease, epilepsy, cirrhosis of the liver, aneurism and arteriosclerosis.

There is no question that Dr. Marshall's book is in every respect up-to-date and the result of very recent study of an exceedingly important subject.

Toxicology. The Nature, Effects and Detection of Poisons, with the Diagnosis and Treatment of Poisoning. By Cassius M. Riley, M.D., Professor of Chemistry and Toxicology in Barnes University, and Dean of Barnes College of Pharmacy; Member of American Medical Association; Member of American Pharmaceutical Association. Third edition, revised and enlarged, with illustrations. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street. 1906.

The average medical man is not supposed to have the time or the apparatus necessary to make an examination for the detection of poison, particularly where he expects to appear as a medical witness. All that can be reasonably expected is that he should have such a knowledge as will lead him to correctly diagnose and treat cases of poisoning if he sees them before death, or to suspect the existence of poison in the dead body sufficiently readily to

enable him to secure specimens that may be placed in the hands of the analytical chemist. As matters of this kind are easily forgotten by the busy practitioner, it is well that he should have at hand a book of reference out of which he can at once refresh his memory as to symptoms and treatment, or satisfy himself that there is a reasonable suspicion of poison.

The writer of this book has so arranged matters that all this can be done with the greatest ease and with the shortest possible expenditure of time. The symptoms, fatal dose, fatal period, treatment and post-mortem appearance, are found at once, and always in the same order. These headings being in leaded type makes it exceedingly easy to pick out the information required at once.

The descriptions are concise, practical, and up-to-date, and the book itself is bound in a most convenient form, being of such a size as to be easily carried in the pocket. A. J. J.

The Medical Student's Manual of Chemistry. By R. A. Witthaus, A.M., M.D., Professor of Chemistry, Physics and Toxicology in Cornell University. Sixth edition. New York: Wm. Wood & Company. 1906. Price, $4.00.

In this edition the section on chemical physics has been largely rewritten, and that on general chemistry has been rearranged and extended. This, the author explains, has become necessary on account of increased knowledge supplied by physical investigations. In the section on organic chemistry there are many changes and some important additions. The author says that we must consider as an organic substance any compound containing carbon, whatever may be its origin and whatever its properties. Organic chemistry is thus simply the chemistry of the carbon compounds. The last section deals with physiological chemistry, and is devoted to the consideration of the proteins and other substances of still unknown constitution. Special attention is given to the composition of the tissues and fluids of the body and the chemical processes occurring therein. The question of immunity, in so far as it is related to chemical action, is discussed under blood serum and bacterial action. Considerable space is given to the chemistry of urine. The whole book is now thoroughly modern, and is well adapted to the requirements of medical students. A. E.

Physicians' Visiting List (Lindsay and Blakiston's). Price from $1.00 to $2.25.

The 1907 edition of this little book marks the fifty-sixth year of its publication. It contains the same features as heretofore, including incompatibles, treatment of poisoning, weights and measures, and a dose table. The book appeals only to physicians

who are very methodical and exact in their habits. One serious drawback to the method of book-keeping is that it is not admissible in a court of justice. Lindsay & Blakiston's is the best pocket visiting list we know, however. E. A. M'C.

A Treatise on the Motor Apparatus of the Eyes. Embracing an Exposition of the Anomalies of the Ocular Adjustments and their treatment, with the Anatomy and Physiology of the Muscles and their Accessories. By George T. Stevens, M.D., Ph.D. Illustrated with 184 engravings, some in colors. 496 pages, royal octavo, bound in extra cloth, bevelled edges. $4.50 net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

Perhaps no one is better known than Dr. Stevens as an advocate of the view that difficulties of adjustment of the eyes are a source of nervous trouble, and more frequently than other conditions constitute a neuropathic tendency. In 1884 he created a sensation by his view of eye strain as the cause of functional nervous diseases. Time has not borne out all of his contentions by any manner of means, but there is no doubt that he did then make a valuable contribution to our knowledge. This present work is a sequel to that on functional nervous diseases, dealing with the motor apparatus of the eye, its anatomy, physiology, pathology and treatment. It is of intense interest to the ophthalmologist, but perhaps a trifle too intricate for one not versed in the specialty.

J. M'C.

Manual of Anatomy, Systematic and Practical, including Embryology. By A. M. Buchannan, M.A., M.D., C.M., F.F.P.S. (Glas.), Professor of Anatomy in Anderson's College, Glasgow; Examiner in Anatomy for the triple qualification of the Scottish licensing bodies; Examiner in Anatomy and in Physiology for the Dental Diploma, and Examiner in Anatomy (Human and Comparative) for the fellowship of the faculty of Physicians and Surgeons, Glasgow; Ex-examiner in Anatomy to the University of Glasgow; formerly Senior Demonstrator of Anatomy in the University of Glasgow, etc. Vol. I. Osteology; Upper Limb; Lower Limb, with 268 illustrations, mostly original and in colors. University series. London: Bailliere, Tindall and Cox, 8 Henrietta Street, Covent Garden. 1906. (All rights reserved.) Price, $3.50. Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

Volume I. is compact, well bound and of a very convenient size for every day use. The type is clear and black, the names of parts being especially marked.

The section on osteology is very full, beginning with the minute anatomy of bone and the ossification of membrane and cartilage.

The descriptions of the bones are full and easily followed, and at the end of each description is an account of the development. In the anatomy of the extremities full directions are given for the various dissections. The plates are numerous and very good. The arteries, veins, and nerves are colored, as are also the tendons in some positions where it is desired to show them clearly, as at the wrist and ankle joints.

In this work we have all that can be desired as a guide in the dissecting room and at the same time a complete treatise on practical anatomy. W. J. W.

Diet in Health and Disease. By Julius Friedenwald, M.D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Second revised edition. Octavo of 728 pages. Philadelphia and London: W. B. Saunders Company. 1906. Cloth, $4.00, net; half morocco, $5.00, net. Canadian agents: J. A. Carveth & Co., Toronto.

Even physicians sometimes do not realize the very great importance of diet as a factor in health and disease. The reviewer often thinks that if, in many cases, more attention were paid to the subject of a patient's diet and less to ordinary drug medication, more rapid recoveries would be the result.

The author has, in his second edition, impressed those facts upon his readers; in fact, no one can carefully peruse his work without being persuaded along those lines. Perhaps one of the most instructive chapters is that giving an account of Prochownick's diet for pregnancy complicated by contracted pelvis. Another interesting section is that devoted to diet at water cures.

The book is not large and tiresome, but a handy size and full of good material.

A Compend of Genito-Urinary Diseases and Syphilis, including their Surgery and Treatment. By Charles S. Hirsch, M.D., Assistant in the Genito-Urinary Surgical Department, Jefferson Medical College Hospital. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1906. Price, $1.00.

This work is of the usual Quiz-compend size and style, but in reality is better classed as a condensed work on genito-urinary diseases. It covers the whole field, giving a very clear and concise account of each disease, with treatment. There are numerous illustrations. The work will be found of service to the general practitioner, and as a review book to the student. W. J. W.

Retinoscopy (or Shadow Test) in the determination of refraction at one metre distance, with the plane mirror. By James Thorington, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic. Fifth edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co. 1907. Pp. 67. Price, $1.00.

The publishers have taken time by the forelock and date the book 1907, a little inaccuracy for which the author is not to blame. This little book deals with the subject in a very simple way, avoiding too much theory. The important addition to the book is the description of the author's electric retinoscope. M.

Medical Directory of Toronto. This publication has been taken over by Messrs. Theo. E. Gibson & Co., who advise us that the 1907 issue is now in press. Previous editions of this valuable manual have contained much information of special value and interest to the profession, and in the hands of the very reliable house now in charge we have no doubt the scope of the book will be further enlarged. Advertisers desirous of reaching the profession will find this a good and economical medium, while it also furnishes reliable lists in convenient form for addressing this constituency.

We acknowledge the receipt of the English edition of "Merck's Annual Reports," Complete Series—Volume XIX. 1905. Darmstadt: May, 1906—which has been sent us from the New York office. A glance at the seven pages of Bibliographical Index and eleven pages of Index of Authors shows how wide a field is covered by these reports. We are pleased to notice that The Canadian Journal of Medicine and Surgery finds a place in the Bibliographical Index. J. J. C.

The National Sanitarium Association recently published the first issue of their new monthly magazine, entitled *Canadian Outdoor Life*. It is full of interest, printed on moderately good paper, and freely illustrated.

Martindale's Extra Pharmacopeia (Latest Edition).—The members of the medical profession will be interested in knowing that Mr. W. Lloyd Wood, 66 Gerrard St. E., Toronto, is now supplied with the 12th edition of this valuable little book for the physician's table. This edition has been considerably enlarged and improved over former editions, containing over 200 pages of additional matter. Mr. Wood informs us that he is now in a position to supply these at the same prices at which they are supplied by the publishers in London, viz., $2.50 per copy. We have no doubt the medical profession will take advantage of this offer and avail themselves of one of these books, as once acquainted with them they will never be without a copy.

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Original Contributions.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

BY CHAS. A. HODGETTS, M.D., L.R.C.P. (LOND.),

Chief Health Officer of Ontario, Secretary Provincial Board of Health, Deputy Registrar-General, Major A.M.S , Canada, etc.

THE present-day requirements as to compulsory education very naturally lead parents to require from the state or municipality some general medical supervision or inspection of their children who commingle daily, often to the number of several hundreds, in our schools. That this demand has not been made before may be accounted for by the fact that in this province we have not had those aggregations of vice, poverty, unsanitary housing, child labor, etc., which prevail in such large centres as New York, Philadelphia, Chicago and Boston on this continent, and in a still more marked degree in Europe, where in its densely populated countries these difficulties are both urban and rural.

Indeed, in some of the cities of England the practice now prevails of giving to the children of the poorer class in attendance at the schools a mid-day meal, of such a character as will nourish their famishing bodies, which are also under medical inspection, and when necessary are also attended by specially qualified visiting nurses.

While the necessity for a medical inspection of our school children is not as apparent as in other countries, yet I am of the opinion that much good can be done along this line.

If the greatest good is to accrue to the state from such work, then it must be provincial and must be worked out on some general plan.

Read before Toronto Branch, National Council of Women.

The scheme must be applicable to rural as well as to urban school children. In such cities as Toronto, Hamilton and Ottawa I can readily conceive of a system of medical inspection of school children being adopted similar to that now being successfully worked in American and English cities, and recently instituted in Montreal.

This work is carried on by specially appointed medical inspectors acting under a department of the Local Health Authorities in the cities of Boston, New York and Hartford; and of the joint control of the department of Health and the Board of Education in Chicago.

The system generally adopted is to divide a city into districts, each with four or five schools of about 2,000 children, to apportion a medical inspector for each district, the salary of an inspector ranging from $200 to $300, and as high as $600 per annum.

It is the duty of an inspector to visit each school in the morning soon after opening, and to examine and report on the children referred to him either by the teacher or the parents. If found ill, the child is sent home with a note to the parents advising as to course of action.

If the disease is a contagious one the Medical Health Officer is notified. It is here the medical inspector's duties cease. He does not interfere as to medical treatment—that is left to the parents.

Upon the return of the child to school a second examination, however, is made by the inspector.

In the case of poverty of the parents one of the staff nurses takes charge of the case. In this manner there is no interference on the part of medical inspector with the rest of the medical profession, and no particular medical school is thrust upon the parents.

By the adoption of such a system of medical inspection it cannot be denied the duties of the teacher and principal will be increased, and it will require the teachers to devote some portion of their studies to the subjects of hygiene, as related to the child and child life, and the diseases incident thereto.

On the other hand, their position is strengthened in all matters covered by this system, in many of which teachers have now to rely on his or her own opinions, and arrive at conclusions and adopt measures, which under a well-thought-out system of medical inspection would not be the case.

The system will enable parents to secure for their children that medical treatment which often up to the date of inspection they were in ignorance of the need thereof.

It will secure to the children that attention of detail in their course of study which through ignorance, in the past, had not

been given; the burden of study will be fitted to the back, and school education will be made to help, not hinder, development in later adult life, and will not overtax the child brain.

To sum up, medical inspection will materially help the improvement and education of this young nation of Canada. We must remember that the child when he comes under the influence of the school law, "has already lived through a long and adventurous history. He is born of parents of a given race, of a given community, themselves featured and developed by incalculable perplexities of influence. He has inherited certain predispositions of his parents. He may have been affected by parental diseases. He may have suffered in his life before birth. He has through many critical moments struggled into individual existence. He has survived all the serious vicissitudes of his first week, his first month, his first year, his first five years of life. He has learned to walk, to talk, to assert his place in the mimic community of children. He has acquired individual habits. He has laid the basis of morals. He has come to some sense of individuality in the family. He has even acquired the rudiments of citizenship. He has at last, by force of the law, made the great transition from the home to the school, from his cradle community to the community of strangers, from the soft nurture of family sentiments to the realities of discipline."

At every stage in his history he has acquired something that his whole life will not extirpate. He has been touched, perhaps, with some diseases that make him safe against them for ever. He has found his organs fit enough to carry him thus far, but he is now about to enter a much vaster struggle, a more remorseless ordeal, a life full of greater stresses, energies and dangers." One, too, into which he is forced by the state.

Is it not, therefore, important and essential for the state to search out the pre-school life influences, and to study their bearings on the modifications it is necessary to make in the course of study of each particular child, and the educational system culminates in the production of the state-evolved man or woman, upon whose completeness devolves the growth of the people as a nation.

What, then, are the principles that should be adopted in a system of medical inspection, one applicable to this province? This is a question which I think should be considered by a special committee appointed by the Government for the purpose, and the personnel of which should be representative of both the teaching and medical professions, which committee should report at an early date. My opinion is, that the system should be under the control of the health authorities and be conducted by medical practitioners acting along definite lines, the immediate object being to ascertain the fitness or otherwise of each child.

The examination should be full and detailed; the information required should be tabulated as briefly as possible. The first examination will of necessity be the most tedious in making; it should include an anthropometric summary of all school children, having for its object the taking periodically of measurements of the child, such information as to include address, occupation and nationality of parents, personal appearance, height, chest-girth; (*a*) maximum weight, length, breadth and height of head, breadth of shoulders and hips; (*b*) minimum weight, length, breadth and height of head, breadth of shoulders and hips; the examination of the eyes, using test by (1) Sneller's type, (2) colors.

Again, there should be a report on the condition of the ears, nose and throat and teeth, and defects in speech, such as stammering. Deformities of all kinds should be noted, also diseases both of the infectious and non-infectious groups, and other special observations which the examiner may deem of import.

In addition to this primary examination, a record of which should be kept on file, there should be a daily inspection of all cases referred by the teacher or head master or parent, this being done by preference each morning, and each week all the pupils of a district to which an inspector is assigned, should be personally examined by him. These inspections are for the purpose of checking the spread of contagious diseases, or permitting of the early treatment of what would be more serious cases of illness.

Those pupils found unfit at the time of their primary examination should necessarily be objects of more careful medical examination. Although they will be decidedly in the minority of the total number examined, their ranks will be increased from year to year by those presenting either physical or mental deficiency. To this class the inspector will naturally include an oversight of their course of study, both physical and mental, thereby presenting opportunities for correction or adjustment.

In addition to the medical inspector, it will be found necessary in some municipalities, such, for instance, as cities, to establish a system of nursing inspection, the offices of which will naturally be extended to those in poorer circumstances. This branch will be found of great assistance in the preventing of the spread of contagious diseases of the acute type, and also prevent the spread of those of parasitic origin, and will very materially shorten the period for which many cases of the latter kind would be kept at home.

MEDICAL INSPECTION OF PUBLIC SCHOOLS.

BY CHARLES J. C. O. HASTINGS, M.D., C.M., L.R.C.P.L. TORONTO.

To say that we are discussing the advisability of medical inspection of schools is, to my mind, an awful reflection on the intelligence of the medical profession, the Provincial Board of Health, our School Board, and, in fact, of all who are interested in the mental, moral and physical welfare of those in whose hands will be placed the destinies of our country twenty-five or fifty years hence. In my opinion, the subject is not debatable. I cannot concieve of any intelligent person, who is at all interested in Preventive Medicine, or the awful problem of race suicide, both of which form an important factor, questioning for a moment the absolute necessity for immediate action in this most vital question. I would be very sorry to think that it might come under the notice of our medical friends in Boston, New York, Chicago, Philadelphia, and, in fact, in all the leading cities in the great Union to the south of us, that we are only discussing the merits of what has long since passed the experimental stage with them.

We have in this fair Dominion of ours conditions suited to produce the very best physical development, and as high a degree of mentality as can be produced in the world. From the Regius Professorship to the men behind the guns in South Africa, or on the Marathon racecourse, the high mental calibre and the physical endurance of the Canadian always places him in the front ranks. Why then should we permit this embryotic material for such production to die or degenerate by thousands annually for want of proper care and protection? It costs our Dominion Government nearly three-quarters of a million annually for immigration purposes alone. Thousands are being imported annually of Russians, Finns, Italians, Hungarians, Belgians, Scandinavians, etc. The lives and environments of a large number of these have, no doubt, been such as is well calculated to breed degenerates. Who would think of comparing for a moment, in the interests of our country, mentally, morally, physically or commercially, a thousand of these foreigners with a thousand persons of Canadian birth? Practically, no effort has been made, no money expended, to secure the best mental and physical development of our boys and girls, while the Government expends over half a million annually for the advancement and improvement of agriculture and stock. Literature is distributed gratuitously advising stock raisers how to properly care for and protect their stock, and, in

* Read before the National Council of Women Toronto, December, 1906.

the event of an outbreak of infectious disease, what precautions to take in order to prevent its spread! Surely, then, the child has some right to consideration.

What other national question could compare in importance with the establishment of a well-organized plan by which the highest development of the youth of this country can be accomplished? Every nation must recognize the fact that what it will be, twenty-five or fifty years hence, depends largely on the boys and girls of to-day; therefore a good physical development, with a high mentality, is the most valuable asset that any nation can have.

While the medical inspection of schools was organized early in the nineteenth century in Austria, Sweden, France and Germany, it was not introduced nor adopted in England until 1889, and in Scotland in 1892, and in the United States early in the nineties, namely, in Boston, Philadelphia, New York, Chicago, and is now adopted in all the leading cities in the States. When we consider what hotbeds public schools are for all infectious disease, the necessity of medical inspection for this purpose alone is self-evident. Where systematic inspection of schools has been enforced, there has been a very marked decrease in contagious disease among children, and in many instances epidemics have been averted by an early recognition of the milder forms of the ailment, and the children removed from the schools. In our own city, some two or three years ago, Dr. Tweedy, of the Isolation Hospital, was sent for to examine a suspicious case in "The Ward." On examination he found it to be a well-marked case of diphtheria; he then went to the school attended by this child and examined all the pupils, finding thirteen or fifteen well-marked cases, which he immediately had removed to the Isolation Hospital. The school was, of course, closed at once.

The neglect of this safeguard to the pupils and the community would, therefore, seem to be inexcusable in any Board of Health or Board of Education.

A recent report of the Board of Health and the Board of Education of the city of New York shows for one single year, through physical examination of children, 15,736 cases of eye disease, 65,294 cases of diseases ranging from diphtheria to whooping-cough, who had to be excluded from attending school, and 33,551 other children who required treatment for various organic diseases and physical abnormalities. Of no less importance, however, is the health of mind than that of the body. The ill results from overwork, mental strain from too prolonged concentration on any one subject, routine examinations, etc., have frequently resulted in a nervous breakdown and serious nervous reactions. All authorities on the nervous diseases of children agree as to

the ill effects of test examinations in the schools. Personally, I have seen enough to convince me they are an abomination, and the teacher who is not capable of deciding, after a whole term's observation, whether a child is fit for promotion or not, is unobservant and does not do justice to his position. In the first place, children of a highly nervous temperament can rarely do justice to themselves in a test, or so-called test, examination. Therefore the examinations are not a fair test of the standing of the nervous pupil, coming on, as they usually do, at the end of the session, when the children are already nearly exhausted.

How many young men have paid for their scholarships and gold medals with a large slice of their constitution, if, indeed, not with their lives? Many pathetic examples of this could be related by any of us. An intimate friend of mine, quite recently, secured his First Class A certificate when he was only seventeen; but he spent the subsequent two years in the Queen Street Asylum, under Dr. Daniel Clark. As Dr. Clark expressed it, "the result of running a twenty-horse-power engine at a forty-horse-power pressure.

How often we see the fond parent of the precocious child, delighted with its unusual activity of mind, encourage it, as does also, ofttimes, the educator, not dreaming that to the psychologist this very precociousness is evidence of a mild form of degeneracy. You rarely find with this premature mental condition a well-developed physical one. Galton, in his study of Distinguished Men of Science, in England, found that nineteen out of twenty were men of unusual physical energy. While we cannot hope to develop a nation of Bismarcks and Gladstones, yet we are serving the nation's best future interests by seeing that the physical is kept well in advance of the mental. What right has any nation to compel its children to go to school without seeing that they are in a proper physical condition to receive instruction, and that they are mentally and physically protected while there?

Dr. Weir Mitchell, in an address delivered to the teachers of Philadelphia, two years ago, drew special attention to the dangers of test examinations and eye-strain. He stated that he had made a careful study years ago in his clinic, in regard to chorea alone, and always noticed an upward curve at the period of examinations, also other marked nervous symptoms at these periods. The children are irritable, restless at nights, often dreaming about their examinations. This has been recognized by most progressive Boards of Education abroad, and these examinations have been done away with and other plans suggested and adopted.

A very common cause of apparent mental dulness or deficiency in children has been discovered to be due to defective sight or hearing, or both. Referring to this, Dr. Mitchell says that, having drawn

the attention of the profession over thirty years ago to the fact that a large percentage of cases of headache were due to eye-strain, and having thereby successfully wrestled with so common an evil as headache, he counts as one of the happiest memories of a lifelong struggle with disease. Dr. Mitchell went on to say that in school children imperfect sight caused headache, vertigo, or even a confusion of mind that makes study impossible. The child gets credit for being stupid or idle, but a pair of glasses makes the differential diagnosis between lazy vice and studious virtue. The highest ideal of the medical profession to-day is prevention of disease; but this has been the ideal of the Chinese for many years, as they only pay their physicians while they are in health, and Japan has over nine thousand paid medical inspectors of their educational institutions. Could not a leaf of Oriental literature along this line be used to advantage by our Board of Health and Board of Education?

Wellesley Street and Rose Avenue.

THE MEDICAL INSPECTION OF SCHOOLS IN TORONTO.

BY HELEN MacMURCHY, M.D., TORONTO.

This question is coming slowly but surely to the front, and a considerable impetus has been given to it by a meeting held in the Canadian Institute under the auspices of the local branch of the National Council of Women, an organization which has more than once earned the gratitude of the citizens, not only by its sympathetic and progressive attitude towards all matters touching the public good, but by actual accomplishment of certain good things. The appointment of a woman as factory inspector has been of untold benefit to the community. We have heard many a physician speak of the work of the inspector, Miss Carlyle, and tell of what she had done for individual patients as well as for the welfare of working-women as a whole. That appointment might not have been made yet, had it not been for the local Council. The action of the Ontario Government in setting on foot active inquiries in regard to the care of feeble-minded women and children is largely due to the representations of the same body, and now, in regard to the question of the medical inspection of schools, they have begun in the same, sensible, quiet and business-like way. Mrs. Huestis, the convener of the special committee appointed, secured addresses from Dr. C. J. C. O. Hastings, Dr. Charles Hodgetts and Dr. Helen MacMurchy. Dr. Hastings has been interested in this subject for years, has brought it before the Ontario Medical Association, and in his address showed himself familiar with conditions in Toronto, as well as with the steps other cities have taken in this direction. Dr. Hodgetts' paper was a most valuable one, as our readers will see for themselves. His suggestion in regard to a Government commission and its composition commends itself to us as one that should at once be acted on. Dr. MacMurchy alluded to her experience of twenty years in the teaching profession, and also to the knowledge gained as physician to several residential colleges for girls in Toronto, where medical inspection is now the rule, and said the poor man's child should have the same medical school inspection as the rich man's child. Visits that week to schools in "The Ward" had impressed Dr. MacMurchy with the fact that eye-strain needed attention among the pupils, and that though their general appearance was healthy, some looked rather underfed and hungry. Probably few of the audience were aware of the next fact stated, viz., that in one school in St. John's Ward hungry children are given a plain dinner of soup or porridge

in winter, the former coming from the House of Industry, and the latter being made on the premises from a bag of oatmeal supplied every winter by a well-known philanthropist in Lindsay who heeds well the Master's injunction not to let his left hand know what his right hand doeth. Dr. MacMurchy also drew attention to the fact that the Medical Health Officer, Dr. Sheard, already does a great deal in the way of medical inspection of schools, under the provisions of the Public Health Act, inasmuch as every case of diphtheria and scarlet fever is carefully recorded and immediately followed up. The spirit of the meeting was most encouraging, and real progress was made in the understanding of this important subject.

Laryngology, Rhinology and Otology

IN CHARGE OF
PERRY G. GOLDSMITH, M.D.
TORONTO.

PARTIAL TURBINECTOMY FOLLOWED BY ACUTE OTITIS, MASTOIDITIS, SIGMOID SINUS, THROMBOSIS, WITH EXTENSION TO THE INTERNAL JUGULAR VEIN.

The number of spurs and portions of turbinals removed nowadays is doubtless very large. The ease with which people now become specialists and the eagerness with which many attack slight abnormalities in the nose, is no doubt responsible for a great deal of the meddlesome nasal surgery seen at the present time. Simply because a man has an irregular septum or an enlarged turbinal is no reason why he should be subjected to operative measures. If there are symptoms of nasal obstruction, whether to breathing or drainage, simple and mild measures may relieve these symptoms completely, and such measures should have first choice. Patients do not come for spurs, deviated septums or enlarged turbinals; they come for relief of certain symptoms, and we should relieve these symptoms by the easiest and simplest means. Because the septum is not quite straight, it does not follow it should be made plumb. Furthermore, in elderly people one should not do any major operation on the septum or turbinals without a prolonged trial of milder measures. Even if the symptoms are not all then relieved, the question is, are they important enough to demand relief. An elderly patient, for example, with a large nasal spur, which has no doubt existed from boyhood, may very well go on with this spur, though it causes temporary and periodic inconveniences. Dr. Charles H. Knight and Dr. James McKernon, of New York, in order to emphasize the importance of even simple operations, record an interesting case. First calling attention to the very small number of serious results following so-called minor operations in the nose, with the result that we all are likely to lose sight of the possibility of their occurring at all, the authors reported in detail at the American Laryngological Association meeting (Atlantic City) a case of nasal obstruction caused by a spur on the septum, and a cystic enlargement of the middle turbinated bone. The anterior end of the middle turbinal was removed under cocaine and adrenalin, by cold snare and

cutting forceps. No packing was used. On the fourth day an otitis media developed, and later in succession, a mastoiditis, lateral sinus, thrombosis, with infection of the jugular vein, making necessary a complete mastoid operation and opening of the sinus and removal of the jugular vein from the skull to below the clavicle.

On pathological examination the walls of the vein and the lymph nodes in the neck were found infiltrated with streptococci, showing the necessity of removing the vein, and not merely opening it and washing out the infected clot. The patient ultimately recovered. When such conditions can occur in the practice of eminent operators, surely it is sufficient to make some of the three months' specialists pause.

In this connection one may aptly quote from Blake's introductory chapter in Bacon's work on otology: "The supplementing of undergraduate teaching by graduate instruction in the special branches of medicine has done something to compensate for defective clinical teaching in specialists' work during the college course, but has opened the door to an evil in the establishment of short courses in otology, as in other departments (laryngology, rhinology, ophthalmology), which can, in a limited time, afford only a little knowledge and enable the superficial student to assume that he has acquired an ability in special practice which could really be obtained only through long and serious study."

THE ETHMOIDAL SINUS.

The discussion of ethmoid disease (American Laryngological Association) was opened by Dr. John O. Roe, of Rochester, N.Y., who first contrasted the general uniformity of the other accessory sinuses in anatomy, pathological conditions, symptoms and treatment with the lack of uniformity on all those points in the ethmoid cells, thus making the disease of those cells often very obscure in diagnosis and difficult to treat.

He discussed the anatomy of the cells at some length, and in considering the symptoms classed the cases under two main heads: those characterized by pain, and those showing marked discharge of pus.

He said that acute inflammations of the ethmoid cells rarely called for operation, excepting when the acute is engrafted upon a chronic condition.

He felt very strongly that very many cases of "chronic ozena," with formation of crusts, and so-called atrophic rhinitis, were caused and kept up by an obscure infection of the ethmoid cells;

and cited several cases with long-standing symptoms extending over years, which yielded to thorough treatment of the ethmoid cells. He therefore strongly advocated very thorough treatment of *early* catarrhal conditions, especially if there were any discharge of pus. The writer then spoke of the many cases of persistent headache, migraine, neuralgia, etc., which were caused by pressure in the ethmoid cells, as well as by pressure of the middle turbinated bone, so commonly noted.

In regard to the method of operating, he condemned the use of the ring-knife and sharp curette as dangerous, and advised the use of the Grunwald punch forceps, and probe; and cautioned against all twisting and pulling, which is so likely to strip up and off the mucous membrane from the bone. He felt that only those cases complicated with frontal sinus disease required an external open operation.

Dr. John W. Farlow, of Boston, continued the discussion of ethmoid disease. He described the anatomy of the cells, and outlined the usual train of symptoms; and enumerated those calling for operative interference as follows: (Summary) severe and long-continued headaches, disturbance of vision and displacement of the eye, orbital abscess, syphilitic necrosis, polypi, and polypoid degeneration of mucous membrane of middle turbinated bone, frontal sinus disease caused by ethmoid obstruction, pus in the antrum of ethmoid origin, and obstinte ethmoid suppuration with pus flowing into post-nasal space causing pharyngitis, laryngitis, bronchitis, asthma and stomach disturbances.

Under treatment, the author spoke of the advantage that the ethmoid cells had over the frontal sinus, antrum and sphenoid cells, in that they were accessible to intra-nasal procedures, and could be thoroughly treated without external opening. In his own experience he had met with almost no cases where other than intra-nasal treatment seemed necessary or advisable. Only where there was an orbital abscess or an abscess pointing on the surface and about to rupture spontaneously, or where there was syphilitic necrosis, had he found it necessary to resort to an external opening.—*Boston Medical and Surgical Journal.*

AN OPERATION FOR THE PAINLESS AND BLOODLESS REMOVAL OF SUBMERGED AND ADULT TONSILS.

This procedure, which is a modification of Pynchon's galvano-cautery dissection, is especially effective for the removal of submerged tonsils. It is supposed to eliminate the disquieting feature of hemorrhage when it is necessary to remove tonsils in adults.

The parts are anesthetized with a solution consisting of equal parts adrenalin, 1-1000, and 10 per cent. cocaine solution. This is painted upon the pillars and injected into the stroma of the tonsil. The tonsil is seized with a volsellum forceps and dissected out with a galvano-cautery knife at white heat. When almost completely enucleated, a small portion of the base of the tonsil being still attached to its bed, the cautery is abandoned, and the loosened tonsil completely enucleated by means of a Matthieu tonsillotome. The author has never seen any secondary hemorrhage after this operation, and believes that it is effectually prevented by the cautery, while primary hemorrhage is taken care of by the adrenalin and cautery combined.—F. B. Kellog, Los Angeles, Cal., *Annals of Ophthalmology, Rhinology and Laryngology,* June, 1906.

This is in reality Pynchon's method, though he prefers to do the operation in two stages. The reviewer has had one experience with the combined method as is spoken of by Kellog, which makes him quite certain that the finishing of the operation with a tonsillotome may be very dangerous. The worst hemorrhage he ever saw occurred in this manner. A better and safer way would be to crush the lower part of the tonsil, "morcellement," with a punch that crushes before cutting. In fact, the entire operation may very throughly be performed in this manner. G

Selections, Abstracts, Etc.

THE INFLUENCE OF AMERICAN SURGERY ON EUROPE.*

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In order to realize fully what American Surgery has achieved, so far, and how it compares with that of other countries, it will be opportune to go back to ancient times.

The earliest surgical records come from Egypt. In the papyrus found by Ebers, the great German Egyptologist, which was written, 1552 B.C., a section, dealing with tumors on the surface of the body, reads: "If this tumor comes and goes under your fingers, trembling even when your hand is still, say—it is a fatty tumor—and treat it with the knife, after which treat it as an open wound." It is maintained that the old Egyptian embalmers had considerable anatomical knowledge which entitled them to act as "dressers of wounds," that is, surgeons. The fact exists that the Egyptians had a treatise on anatomy. According to Manetho this was attributed to Athothis, son of Menes, who reigned in 5241 B.C.

Specimens of Jewish surgery are found in the Talmud, the rabbis being acquainted with methods of suturing wounds, trephining, supplying the loss of substance.

Of Indian surgery, the Charaka-samhita, the oldest medical work in existence, tells us many interesting facts. It is deplorable that the Sanskrit text of this work was only translated shortly ago. The Charaka-samhita was probably written in 1000 B.C. Another well-known Indian book, composed somewhat later, is the Susruta. These works contain a list of complicated surgical instruments; among them are such recommended for amputations, for lithotomy, the treatment of fistulæ, polypi, sores, ascites, inhalation for cough and dyspnea, obstruction of the intestines, etc.

The immortal songs of Homer, which supposedly were written at the same period, often allude to surgery. The nomenclature is nearly identical with that given by Hippocrates. The arrow

*Address read at the first Fall Convocation of The George Washington University in Continental Memorial Hall, October 17, 1906.

wound inflicted on one of Nestor's horses by the bow of Paris is most scientifically described. It was at the top of the skull and had apparently penetrated the brain, which fact was diagnosticated from the symptoms, the wounded horse having convulsions and turning round and round the pole.

Aristophanes, the great poet with the loose tongue, describes the slave of Lamachus as he calls for compresses dipped into hot water wherewith he intended to treat the sprained ankle of his master.

If we study the fragments of the various writings of great Hippocrates, who was born on the island of Kos, in the year 460 B.C., we are so much surprised by the success of surgical operations performed under so many great difficulties at that period, when anesthesia was unknown, that it can be well understood that some are still inclined to doubt the authenticity of the records. The Hippocratic oath, a document of the highest rank in the history of civilization, indicates the necessity of observing the most scrupulous cleanliness, and foreshadows some knowledge of aseptic rules.

Faithful as the reproductions of the classical sculptors and poets were, whose creations are still a model of keen insight into nature, stripped of fanciful and glittering flights of imagination, no less painstaking was surgery at this period, where the natural phenomena were carefully and truthfully studied by actual experiment and demonstration.

The head of the Cnidian School, Euryphon, who was a contemporary of Hippocrates, analyzes the evils of overeating most thoroughly, and as if he had foreseen the modern stomach, advises artificial vomiting for the purpose of testing the different degree of digestibility of the various kinds of food. Thus he has in fact inaugurated the "test-meal," this less esthetic than powerful weapon of the hypermodern stomach specialist.

In this glorious period the surgeons were held in high esteem. One of the indications of their high standing may be found in the royal fees they received. The annual salary of Democedes of Croton, from the city of Athens, from the commonwealth of Aegina, and from the Samoan tyrant amounted to 8,000, 10,000 and 16,000 drachmæ, that is, $1,600, $2,000 and $3,200. When Democedes was captured by the Persian King Darius, the highest honors were conferred upon him at the royal court, where he finally acted as confidential adviser of the famous ruler.

The great Roman people developed the art for which the Egyptians and Greeks had laid the foundation. The era of the Roman Emperors developed a number of brilliant surgeons, among whom Antyllus, Heliodorus, Leonides, and Archigenes may be prominently mentioned.

Only fragments are left of this admirable knowledge in the abstracts of Aetius and Oribasius, later of Paulus of Aegina. They appeal to us like the torsos of those magnificent antique masterpieces at whose overwhelming beauty we are now only able to guess. Surgical operations were performed at that period which simply astonish us.

A slight indication of what must have been lost of the immense knowledge of the great Hippocratic era, and how advanced the technics of Roman surgery must have been, may be gleaned from a visit to Pompeii. On my repeated visits to this most interesting place, it struck me that the peculiar construction of the House of the Surgeon, so well known to the readers of Bulwer's "Last Days of Pompeii," pointed to more or less developed aseptic principles. The streams of water constantly flowing through the streets of Roman cities were certainly apt to remove bacteria, or at least much of their favorable soil of development, and the large number of small wells in the house of the surgeon suggests that the wounded as well as the instruments and dressings were subjected to a very thorough cleaning before and during operation. This would be in harmony with the advice of Hippocrates to frequently wash the patient before performing an operation. I can fully understand why these old masters, with their fine art of diagnosis and their powerful weapon "cleanliness," have obtained much better results than the surgeons of not many years ago, who went to the operating table directly from the autopsy room, after having washed their hands in a questionable fluid, repeating their dissecting art on the living subject, which thus frequently became a premature specimen for the autopsy room.

The surgical instruments excavated at Herculaneum and Pompeii, and exhibited now in the National Museum at Naples, are all of the most admirable perfection. There are many apparatus which many a spectator thought to be devised only half a century ago. But they existed before the advent of our Lord. *Tout comme chez nous.* The instruments all being made of steel or of bronze, are naturally aseptic.

With the downfall of the great Roma surgery took a speedy decline. Only the chevaleresque Arabs learned antique culture from the direct translation of Greek sources or indirectly through Syrian and Hebrew traditions. But these gallant savants handled words better than the scalpel, and with the only exception of practical Abulkasim were not talented for surgical technicisms.

The surgical literature of the Arabians being gradually translated into Latin, became known to the Christian occident, where intelligent monks, who indulged in the study of natural sciences,

took an interest in it and spread it. Among these highly creditable men Guilelmus Placentinus, Hugo von Lucca, Brunus Longoburgensis, Theodericus, the bishop, Lanfrancus and especially Guido de Cauliaco, must be mentioned. But they were situated like the preacher in the desert, and as a whole surgery was held in so little esteem that it became a rule among the German Mastersingers of this sad period not to accept an apprentice or disciple until he could prove that he was fourteen years of age, of decent parentage, and "in particular, not related to any flayer, hangman, *surgeon,* or similar individual."

But fortunately, the long, cheerless mediæval night was followed by the dawn of the Cinquecento, the same merry period which gave great Christopher his chance to discover us. This era, so justly called the Renaissance, stirred up minds all over the world. Antique culture was studied in its original diction again. Old inveterated dogmas fell to the ground and criticism came up, and with it also the Renaissance of Surgery began. The genius of fearless Andreas Vesalius, of the German town of Wesel, convinced Carl V., the German Emperor, that anatomy was the foundation of surgery, and that unless the government would permit of dissection for scientific purposes, surgery would remain a living lie.

That day, in fact, on which autopsies became legitimate through the Hidalgo-philosopher on the German throne, marks the resurrection of surgery.

Now the splendid epoch stamped by the genius of French surgeons, followed. Ambroise Paré reintroduced the ligature of the blood-vessels, his large experience on the battle-field also enabling him to advise a more simple kind of treatment of gunshot wounds. Surgical schools were founded in France, J. L. Petit, in contradiction to his name, becoming the greatest representative of the surgery of the eighteenth century, Désault founding the first surgical clinic, and Larrey, of whom a Napoleon said that he was the only living man whom he ever respected, showing up the greatest and noblest of all military surgeons. The largest influence upon the surgical world was exerted by Dupuytren, however, who was not only the great master of the scalpel, but also excelled by his thorough understanding of pathology, which was at his time in its infancy.

While the French were on top, our English brethren were by no means lazy. Nearly three hundred years ago Harvey detected the circulation of the blood vessels. In John Hunter we see the great surgical pathologist of the eighteenth century, and in Astley Cooper and Spencer Wells the bold but conscientious operators. The greatest blessing which the surgical world received from

Great Britain, however, was the antiseptic wound-treatment inaugurated by immortal Lister.

In Germany the far-seeing eye of Vincenz von Kern gave us the open-wound treatment, the principles of which have come to honor again. Scientific pathology, born in the same country, brought reforms, which, like monuments, *aere perennius,* will forever stand in history. The theoretical reflections of Rokitanski, Skoda, Helmholtz, and Virchow were soon utilized in practice by surgical masters like Dieffenbach, the father of plastic surgery, by Stromeyer, Von Langenbeck, von Esmarch, Volkmann and Billroth. The discovery of the Roentgen Rays, which revolutionized some of the most important departments of surgery, has also added new lustre to the German laurels. The highly developed university life favored the universal direction of the minds, so characteristic for the nation of thinkers and dreamers, their tendency to deepening of thought and their admirable endurance in methodical work, were factors which made Germany the centre of pathological science, this great fundament of modern surgery.

Still, the art of surgery could be practiced only under the greatest technical difficulties on account of the pain the patient had to endure during an operation. Long procedures could not be carried out at all, therefore the manual skill of the old surgeons, who were forced to perform their operations with the greatest possible hurry, must have been enormous, and calls for our highest admiration.

It is assumed that in ancient times anodynes were known. The potion which the Trojan Helen was able to brew so well and mischievously was supposed to banish care and dispel depression. The women of Thebes prepared the "Extractum Thebaicum, irae et tristitiae medicamentum." It is reported of Julius Caesar that before he escaped the pirates he put them to sleep by dropping a narcotic into their wine.

How far these reports are true cannot be proven. It is certain that at a remote period we see a manifold interest displayed in the study of bodily pain and its alleviation.

During the classical age, which left us the most wonderful expression of physical pain in the matchless Laocoon group, bodily pain was frequently represented on the stage.

But there is no indication that ever before a surgical operation was performed during which the patient did not suffer the horrid agonies of combined physical and psychical pain, until it was reserved to the United States of America to give the world that immense blessing, anesthesia. The discovery of sulphuric ether in 1846, as a safe means for making a patient senseless without any danger to his life, brought more progress in a few years than

thirty centuries had brought before. Operations could be performed now, the possibilities of which our ancestors could hardly dream.

The name of the discoverer, Dr. W. T. Morton, of Boston, should be a household word through the entire civilized world. But, alas, there is hardly one non-medical man who knows even the name of this greatest benefactor of suffering humanity.

Nothing illustrates the peculiarity of human nature more clearly than the deplorable fact that the public at large ignores such men. Public squares are ornamented with the statues of generals, whose victories were sometimes won in spite of rather than because of their abilities, or simply by the bravery of their subordinates. The truly great hero, who has sacrificed himself to find the means of preserving lives instead of destroying them, is forgotten; while the least thing gratitude could do for him would be to erect a monument in every village of the earth.

To those of our European confrères who are still endeavoring to belittle American achievements, it may be said that if America had contributed nothing else than anesthesia to surgery it would have done well enough.

But it has contributed a great deal more. It is true, in general the United States could not parade with their medical education of thirty or thirty-five years ago. Preliminary education was not obligatory, and more than one brave Agricola metamorphosed, like great Cincinnatus, who was called to the head of the army from his plough, into a faithful son of Hippocrates over night. Only eighteen years ago any candidate could even in the best eastern strongholds of science be promoted to the degree of an M.D., after having studied for two years. We may be somewhat ashamed of that period, but at the same time we can well boast of the rapidity with which the change to the better was made. It would have taken a century in the Old World to accomplish that progress which was made here in a decade.

And if the whole truth will be said, then our criticizing colleagues in Europe must not only accentuate the state of cloudiness, ignoring the bright sunrays which were shining even through the darkest epochs of American history.

It is true, American medical training is still briefer than European. But even when American physicians graduated after a two years' course, they knew well that their training was incomplete and the majority tried hard to perfect themselves. Most of the European physicians went into practice after four years' study then: but many of the Americans became assistants in hospitals, or practiced under the auspices of an experienced physician several years, thus doing voluntarily what the law might well

have required. To-day the plan of study in American medical colleges embraces a term of four years, while in Germany, France and England it is at least five. Now, while this is a year more, we may emphasize that the American student really studies, and loses no time in libations and duels. The control which the recitation scheme exerts compels him to stick to his work. This, perhaps, makes him somewhat too solemn, while the average German student represents the other extreme. The American student might well absorb some of the poetic qualities of his hilarious German confrère, while the German student would be benefited by adopting some of the more business-like methods of his transatlantic commilito.

Of course, the great European institutions, especially those of Germany, England and France, serve as models in many respects. They are well endowed by the government, and the professors do not go into the fight for existence. Still, not meaning to belittle their excellent work, the question might not be out of place: How would it compare, if they had to make a living from their practice at the same time? We deplore this fact, but we cannot help admiring the American medical soldier who fights his daily battle at the sick-bed, and still has enough energy left to spend the midnight hours at the laboratory, while every new problem he solves is intended to prevent disease, and thus to lessen the earnings of his own profession. Is there anything less selfish in this world? Common sense appreciated long ago that the medical scientist and teacher should be more independent from practice; yet it may be doubted whether a teacher who is not at all engaged in practice will be best fitted for instruction after all. The teacher must never lose sight of the fact that whatever his research may tend to, it must always be to the benefit of human beings, if he does not want to lose his vital relation with the greatest of all professions.

It is true that to the extraordinary thoroughness and perseverance characterizing German investigators, the medical sciences are greatly indebted. On the other hand, a great deal of time and opportunity has been wasted by this praiseworthy quality on trivial subjects. Virtue may become a fault sometimes, as Goethe says: "Wohlthat wird plage." No American could, for instance, be found who would devote a lifetime to write six volumes on the iris of the viper. It was reserved for a German investigator to display such loving interest in a snake.

The motto of the American is utility. Where he sows he expects fruit. He has a keen eye for the "proficit and deficit." This, also, is both his virtue and his fault. No wonder that he astonishes the civilized world—not only in surgery—by the bril-

liancy of his technics. Theory is not the sphere he enjoys; it is practice. Goethe may have thought of the American when he says in Faust:

> "Grau, theurer Freund, ist alle Theorie,
> Und gruen des Lebens goldner Baum."
> (Gray, my dear friend, is theory,
> But ever green, life's golden tree.)

And while Germany will probably keep its leading position as far as the theoretical branches of medicine are concerned, the United States will become authoritative in practice. Asepsis, the daughter of antisepsis, while the result of the research of Pasteur, Lister and Koch, was methodically introduced into practice by von Bergmann. But the greatest perfection of the new method has an American trademark. Nowhere are aseptic technics so commonly practiced and so perfect as in the surgical strongholds of the United States. The natural cleanliness, so characteristic of American habits, has of course been a most favorable element for the introduction and appreciation of aseptic principles.

The American nation is acknowledged all over the world as the cleanest. It is therefore not astonishing that asepsis has been more highly appreciated here than anywhere else, and it is easy to understand that this country is destined more than any other nation to develop asepsis to its fullest perfection.

It is safe to say that in many respects the United States have fulfilled a noble mission in this direction for many years, a task not to be underestimated. There are a number of signs indicating that this characteristic sense for cleanliness has, like some other American virtues influenced other countries indirectly. What a change, for instance, is observed in immigrants who come from semi-barbarous districts, where even an annual bath is regarded as an extravagant and foolish luxury. They sometimes carry all imaginable varieties of mother earth, especially on those surfaces of the body not covered by clothing. When they scratch themselves for obvious reasons they become self-inoculated with the germs harbored in their well-cultivated filth. As bacteriological investigations prove, all sorts of pus-producing germs are found in their skin, so it is only too natural that the skin surface of such individuals is covered with boils and swollen glands. The example of their new fellow citizens soon teaches them a good lesson, and in the second generation the sense of cleanliness is generally very well developed.

Of course, there will always be some who are never able to be thoroughly clean, no matter how often they are admonished. Originally, it is true, such virtues arise more from a trait of

character than from education. Some, so to say, are born clean. Still education does a great deal. The youngster always reflects the mother more or less. If he is clean, there is little doubt that his mother took pains in teaching him how to clean his hair, his finger-nails, the sole of his foot, his mouth and his clothing. And external cleanliness often is the reflection of the purity of character. Tell me who your mother is and I will tell you who you are.

And most important is this virtue in the members of the medical profession. A physician whose exterior is not absolutely clean should be invariably rejected by his patient. If his finger-nails are not scrupulously clean, the same hand which should be destined to destroy disease is apt to produce it.

There is even among the commonest American people a natural sense for asepsis, similar to that in the old Roman sister. This accounts for the enjoyable fact, that the American patient, so to say, enters the atmosphere of the operating-room in a kind of aseptic disposition.

It is by no means surprising, therefore, that the mortality rate of some American surgeons to-day is lower than that in any other country, the mortality in some of the important abdominal operations descending to less than 1 per cent.

But there are still more sunrays in the history of American surgery, which, I feel justified to say, reflects the extraordinary history of this country. Many such rays were shining even during the interregnum, that much-criticized period, because medical men arose whose names will never vanish from the medical history of the world. We may only mention the names: McDowell, Warren, Sims, Mott, Parker, O'Dwyer and Corning. Europe should not forget that, at the time when French surgery was at its zenith, when French professors dictated the surgical fashions, when Dupuytren, the greatest surgeon of his time, refused to be operated on, saying that "he would rather die by the hands of God than by those of his colleagues," the genius of the simple American country physician, McDowell, broke the prejudice of centuries by performing the first ovariotomy. Dupuytren had strong reasons for his despondent standpoint, because he suffered from a pus-chest, and among fifty operations carried out by him for this condition, forty-seven were unsuccessful. To-day, thank God, the proportion is reversed.

It was shortly afterward that Valentine Mott astonished the surgical world by his ligation of the arteria innominata.

Modern gynecology is the creation of Marion Sims. He was a country physician, like his Southern colleague, McDowell, and like the great German, Robert Koch, who was a village doctor until his forty-fifth year, his immortal experiments, which showed

the tubercle bacillus to be the cause of the most important human disease, having been made far away from, and uninspired by, great university centres. It was O'Dwyer who invented laryngeal intubation; Corning is the father of spinal anesthesia; Senn's intestinal suture is used, and Murphy's method of uniting the intestines by his ingenious button is practiced all over the world.

And what would the knowledge of the most important abdominal disease be, had American ingenuity not lifted the veil from the pathology of the vermiform appendix and exposed its mischievousness?

The Old World was always used to give us, but in reference to the knowledge about appendicitis it had to receive from the young transatlantic giant. The American perspective is now being accepted by the European surgeons, their views becoming greatly altered at last. How the majority stands now may be illustrated by their attitude during a discussion of one of the leading medical societies of Germany, which I had the privilege to attend.

The discussion upon appendicitis, which was inaugurated by the Berlin Medical Society on July 18th, attracted so much attention, in fact, that its distinguished President, Professor von Bergmann, was induced to call two subsequent meetings for the exclusive debate upon this special subject. Most of the eminent teachers of the Berlin University participated, among them Olshausen and Landau, the gynecologists, Kraus, the greatest German internist of the present day, Heubner, the pediatrist, Ewald the enterologist, and the surgeons Israel, Krause and Rotter.

Almost all pleaded in favor of early surgical interference. Although it was most gratifying to hear the same views expressed for which many American surgeons have been fighting for the last twenty-five years, it was disappointing to find that no allusion was made to their immortal merits in this respect. As this omission was pre-eminently based upon the traditional European ignorance concerning medical events in the New World, I was glad to avail myself of the chance offered to me by the kind invitation of the President, to congratulate the distinguished society on having become so thoroughly Americanized on the question of appendicitis.

Especially did I emphasize the fact that a glance over the tremendous literature of this most important part of the surgery would reveal that until a few years ago the early operation for appendicitis was regarded an adventurous policy in Germany. "Only an American would do such a thing," a celebrated surgeon in Berlin said to me not more than eight years ago, when I tried to convince him that the apparently mild symptoms of this disease

were frequently misleading and often contrasted greatly with the severe pathological condition of the appendix.

This knowledge, that in the majority of cases it is impossible to make an accurate diagnosis as to whether there was a so-called catarrhal appendicitis or a beginning perforation, was gained by American surgeons, who learned the facts from their frequent autopsies in vivo. That the infection was much more dangerous than the well guarded scalpel, is an American axiom. That early interference, even with the risk that, once in a while, an unnecessary operation may be performed, is the safest procedure, was proven by the extremely low death rate of such American surgeons as were given an early opportunity to operate by the family physician.

It was the genius of an American surgeon which introduced the most important diagnostic factor in appendicitis, McBurney's point, into medical science. American surgeons, like Senn, Weir, Bull and Murphy, were the pioneers and advocated the necessity of removing the appendix during the free interval, that is, even after a patient had recovered from an acute attack, because they realized that with a few exceptions the disease had passed over into the chronic stage only. It is perfectly true that to the Germans belongs the credit for first having given a correct scientific description of the inflammation of the vermiform appendix. But they missed the causal nexus entirely, attributing the pus-accumulation in the right iliac fossa to an inflammatory process in the loose connective tissues which surround the cecum. It was not more than logical, therefore, that they gave this condition that fatal term "perityphlitis."

The first description in 1830 is from the pen of Goldbeck, under the auspices of his teacher, Professor Puchelt, of Heidelberg, the same celebrated university to which we are indebted for the first description of cholelithiasis. (Loewenberg in 1554.)

Less than thirty years ago great Friedreich, of the same old alma mater, taught that perforation of the vermiform appendix might be caused by the irritation induced by a grape seed, this occurrence always leading to death. Fortunately, he claimed, this kind of "ulceration" was extremely rare, inferring from the fact that he had not seen more than two cases of this kind. When I then, *jurans in verba magistri,* attended these lectures as a student, I hardly thought of ever seeing more than a few cases during my surgical career, while the more mature knowledge I had the privilege to obtain in this country enabled me later to remove more than a thousand appendices. Although Schmidt as early as 1847 came very near describing McBurney's point by calling attention to the peculiar intensification of the pain produced by pressure in the cecal region, emphasizing at the same time the fact

that the area of pain hardly exceeded the size of a nickel, none of these great thinkers, strange to say, thought of the most obvious indication of attacking this area directly.

In spite of the most convincing proofs brought by American surgeons in favor of early interference, the Germans, otherwise so progressive, until recently remained obstinate in their so-called conservative treatment of appendicitis, which, in other words, was nothing but a peculiar form of therapeutic nihilism. It is remarkable that the same men to whose genius we are forever indebted for the elementary knowledge of the surgery of the alimentary canal, liver and kidneys, were so long perplexed by the appendix. Let us be grateful that the nation which produced a Kant, the man of the categoric Imperative, has at last begun to respect the little treacherous rebel. American surgeons do not imagine even now that they know all about appendicitis. They have still left a good deal to their European confrères for further development, and no doubt they are justified in expecting, especially, much from the theoretical research of German scientists.

The etymological conscience of the great Berlin society was again disturbed by the Greek ending of the Latin word, a union which they regard as a misalliance. The terms perityphlitis, perityphlitis appendiculas, epityphlitis, scolecoiditis, were again proposed for substitution. It is true that all these terms are irreproachable from an etymological point of view, but as to their real meaning they are absolutely misleading. The term "perityphlitis" has done incalculable harm, as it greatly diverts the mind from the real source of the evil, while the term "appendicitis" means exactly what it signifies. And, moreover, the whole world has become accustomed to it. Therefore the "term-scavengers" will have to swallow the pill after all, whether they like it or not. In German it may be compared with indulging in onions—*Man weint dabei und isst sie doch.*

Usus est tyrannus! They should remember that medical etymology shows a large number of more or less euphonious terms, which are unjustifiable or even senseless. Bronchus means passage for beverage; arteria, air-passage; parenchyma, effusion; muscle, little mouse; and we are so much used to them and know their meaning so well that none of us would seriously consider proposing their abolition. The etymological auto-da-fé on the part of the term-scavengers made the word appendicitis only more popular. We may predict that the American term will be used all over the world as long as there shall be a human appendix.

Especially the German term-scavengers should consider that the language of Goethe, Schiller and Lessing contains words which are nothing else but ungrammatical nonsense. And they are by no means compositions of foreign words, nor do they represent

one of those special medical terms which are so sarcastically rated by our good friends the philologists. No, they are used by them in every-day language without any scientific rumination.

Is there, for instance, a greater absurdity than the German word "Bediente," which means exactly the opposite of what is meant? The "Bediente" in fact is the master, he is the individual who is served, not the one who is serving. But this term is still better liked in literature than the simple and correct "Diener," is if this word gave him a kind of aristocratic odor.

"Ein gedienter Soldat" is just as wrong. In some German universities the term "Chirurgischer Instrumentenmacher" can be witnessed from the windows of the auditorium of celebrated philologists, and in Berlin numerous "Bohemian Fruit stores" are found, although a fruit store in the capital of the German Empire must naturally be German.

It is not the maker who is surgical, but the instrument; and it is not the store which is Bohemian, but the fruit. To the same etymological jurisdiction belongs "der duerre Zwetschgenhaendler."

The proposition of Professor Kraus, to request the government to demand more particulars as far as the statistics on the morbidity as well as the mortality of appendicitis are concerned, fell on fruitful ground. The Secretary of State, who honored the meetings by his presence, promised to see to it that every German physician should be provided with question blanks for the purpose of entering the details of his experience, especially regarding diagnosis and operative treatment of appendicitis. In this respect Germany may serve as a model, and while the American physicians do not need as much elucidation in reference to appendicitis as the German, it will be of general benefit were they to adopt the same plan.

Another sign of American influence is found in Berlin. There the physiognomies of the good old Charité, the venerable temple of Aesculapius of the Berlin University, and its neighbor, the anatomical institute, have greatly changed since last year. A score of large, modern buildings were erected, Orth's pathological institute, Hildebrand's surgical, Henoch's pediatric and Lesser's dermatological clinics simply representing the best and most progressive institutions of their kind. There is, in fact, a remarkable combination of architectonic beauty and general usefulness.

The greatest progress, however, being made in Berlin at the present time is represented by the new anatomical institute. No American should fail to visit it, not only because it is a real delight to look at it but especially for the reason that its construction is based upon American ideas.

We have all reason to be proud of the fact that Professor

Waldeyer, the greatest anatomist of the present age, who has instructed most of our eminent teachers of anatomy, gives full credit to the excellence of the American institutions which he had visited twice during the last few years.

"The Americans," such are Professor Waldeyer's own words, "are ahead of us Germans in many respects. The idea of placing kitchen as well as operating and dissecting rooms under the roof, wherever it was practicable, struck me as an extremely good one, and I made up my mind at once to persuade the Prussian government to adopt the American plan in the construction of the proposed new anatomical institute, that is, to provide for abundant light from above as well as from the side."

"How can we draw students from America, as long as our dissecting rooms are dark and antiquated, while the New World is so far ahead of us in this respect?" was the argument, which convinced the Prussian Minister of Education after a long struggle.

The immense building is now almost completed. There are four large rooms, or rather halls, which permit of simultaneous dissecting by 400 students. The space, in fact, is now so ample that each of the students of the second course, who have to dissect vessels, nerves and the sensorial organs, has his own table during the entire year.

Like Professor Waldeyer, who has become so true a friend of this country, many great European scientists have visited us. The International Congress of 1904 in St. Louis brought no less than one hundred and forty illustrious men from the other side to these shores. All were full of praise, and if men like Helmholtz, von Esmarch, Czerny, von Winckel, von Mikulicz, Lorenz, Tillmanns, Escherich, Trendelenburg, Orth, Harrison, Segond and Faure asserted that they could not help learning a great deal during their visits in America, we may safely believe that this is not merely a courteous phrase. The great European scientists who studied this country by personal inspection are all admirers of it. It is only the small man, who enjoys belittling whatever comes from America. "What good can come out of Nazareth?" those idiots say.

Ewald, another celebrated visitor, wrote in an editorial of the *Berlin Clinical Weekly*, four years ago: "How long may it take till we must go to the United States, as the engineers and men of industry had to long ago, to accumulate new scientific knowledge? Then the scientific exchange will not be one-sided but mutual."

The time has come. Where else is there a country with such immense resources and the ambition and the brains to utilize them? Where else is the spirit of liberality which receives the

foreigner like a brother? The dawn of a new and glorious scientific era can be well perceived on the American horizon.

Yes, the time of reciprocity, for which we hoped so long, has come. Let us compete with our European confrères by mutual exchange. Let us visit Europe as frequently as possible, and let the Europeans visit us. Let them give us their refined knowledge, based upon classical and fundamental research, and let us show them the splendid technical achievements which are so characteristic of the United States. If anything can help to secure eternal peace between the nations it is the strengthening of their scientific ties.

ABSTRACTS.

Lupus Vulgaris.—Two cases of lupus of the ear, illustrating the serious nature of the disorder, are reported by A. Ravogli, Cincinnati (*Journal A. M. A.*, January 5). In both, the tubercle bacillus was found in the extensive ulcerations destroying the external ear, and in one the disease had deeply involved the underlying bony and other tissues. He remarks that connective tissues, bones and fascia do not have the resisting power to the tubercle bacillus that is possessed by the skin, and when the germ gets away from the latter it is no longer under control, and in a short time the disease is reproduced in a nodular or disseminated form, which represents miliary tuberculosis of the intestinal organs. Lupus, therefore, is always a serious disease, and prognosis should be guarded in any case. The best results, so far, were obtained by applications of pure lysol, which forms a hard whitish eschar, followed by healthy cicatricial tissue. The article is illustrated.

Acute Infections of the Thoracic Cavity.—J. H. Musser, Philadelphia (*Journal A. M. A.*, January 5), considers the subject of empyema in its earliest stage when located between the lung and chest wall, between the lobes and between the diaphragm and the lungs. The frequency of this condition cannot be accurately estimated, he states, though he gives the statistics of hospital experience and the literature. He thinks, also, that there is evidence that many of the cases of so-called unresolved pneumonia properly fall under this head. The clinical course and symptoms are described in some detail, and he insists on the importance of not masking constitutional symptoms by drugs in these cases. Localized tenderness is a much more important symptom than pain, and, among the physical signs, he notices as of particular importance, the occurrence of skodiac resonance, which can frequently be elicited to a very decided degree, when at the same time fremitus and the

breath sounds over the hyper-presonant area may be entirely absent. He has never seen this combination occur, except in cases of localized purulent collections, either between the lobes or at an opposite point from the resonant area. Exploratory puncture is not reliable as a means of diagnosis, and in most cases he feels bound to advise direct exploratory operation. Every argument that can be offered in favor of it in abdominal disease applies equally well for thoracic conditions. In this connection he gives a table of the depths of blood vessels from the surface of different parts of the chest, in inches and centimeters, which shows the ease with which all points may be reached by the finger or trochar. The diagnostic difficulties in differentiating these cases from tuberculosis or abscess are mentioned, and the leading points of difference are given. The clinical course of tuberculosis, the absence of leucocytosis, the pulse and respiration rates, the probability of glandular involvement elsewhere and, of course, the tuberculin reaction and the finding of the bacilli are of value in the diagnosis of tuberculosis. Multiple abscess is also difficult, but it usually follows a broncho-pneumonia, streptococcic or influenza bacilli, and the sputa will generally suggest the nature of the lesion. The physical signs are those of small areas of consolidation, and then of cavity formation, rather than of pleural lesions. He urges the internist to make as early a diagnosis as possible in these cases, and when in doubt to have the advice of the surgeon at once. He also pleads with the surgeon to give more attention to this class of cases, and not to delay operation till too late.

Blood Pressure after Withdrawal of Fluid from Thorax and Abdomen.—J. A. Capps, Chicago (*Journal A.M.A.*, January 5), has tested the effect on blood pressure in fifteen cases of the thoracocentesis in which aspiration was performed. During the excitement of preparation and the pain of puncture there is usually a temporary rise. During the withdraw of fluid the pressure falls constantly, as a rule, reaching the lowest point at the time of or after the withdrawal of the needle. The average fall in nineteen aspirations was 20 mm. Hg. The final pressure taken an hour or more after tapping is generally from 5 to 15 mm. lower than the initial pressure, the average fall for nineteen aspirations being over 8 mm. The amount and rapidity of withdrawal are important factors in determining the degree of fall. Other things being equal, it is less with slow than with rapid aspiration. The duration of the effusion is of the greatest importance; in recent cases the fall is usually not great and the recovery is rapid, while in old cases the fall is greater, doubtless because of the difficulty and slowness of lung expansion. Vascular senile changes seem to favor a relatively rapid and deep fall and slow recovery, but heart disease alone has apparently little effect. Pneumothorax also, even

when extensive, has but slight influence. Capps also tested the effect of abdominal paracentesis in nine cases of ascites, all in a sitting position. Epigastric angina, due to reflex spasm of the abdominal arteries from irritation by the needle, produces a very rapid rise of the general arterial pressure. During the drainage of the fluid, as a rule, a fall occurs, averaging 32 mm. It is usually lowest several minutes after the needle is withdrawn, but it may occur at any time during the procedure. Once a fall of 62 mm. took place in the first minute of drainage, when 2,000 c.c. of fluid escaped in that length of time. This was probably in the nature of a temporary collapse from sudden relaxation of the splanchnic vessels. In other instances the fall was very slight. The final pressure, taken an hour or more after paracentesis, averages 12 mm. lower than the initial pressure. The rate of withdrawal seems more important as regards the immediate fall in arteric pressure, but the final pressure is more affected by the amount of fluid withdrawn. External pressure on the abdominal wall often raises the pressure from 5 to 12 mm., acting in the same way as Crile's pneumatic suit in shock, supporting the splanchnic vessels and relieving abdominal engorgements. Posture is important. Normally, the pressure is higher in the sitting than in the recumbent position. At the end of paracentesis, however, lying down often increases the pressure from 6 to 20 mm. The improvement is most marked in patients who undergo a decided fall of pressure during the operation. In conclusion, Capps mentions the desirability of observations of the blood pressure curve in a large number of cases in which simple siphonage without aspiration is used in thoracocentesis, and of further experimentation with both mechanical and medicinal agents for the prevention and relief of untoward circulatory symptoms occurring during the withdrawal of fluid.

The "American Journal of Dermatology and Genito-Urinary Diseases."—A considerable number of changes have been made in the *American Journal of Dermatology and Genito-Urinary Diseases*, and they are of such a nature as cannot fail to commend them to the approval and goodwill of its readers. The size of the journal has been enlarged, the number of pages of reading matter has been increased, and all this without making any change in the subscription price. It numbers among the contributors to its pages the best and most celebrated dermatologists, syphilologists and genito-urinary surgeons who write. Whatever of theirs is printed is well worth reading, and, in addition to this, there have been added several departments which will add increased interest and usefulness to the journal.

Christmas greetings as sent out by a well-known professional brother in Toronto Can you guess who?

The Canadian Journal of Medicine and Surgery

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Editorials.

TUBERCULOSIS SUFFERED TO INVADE CANADA.

THE Toronto Board of Trade, December 31, 1906, over the signatures of the president and secretary, addressed a letter to Sir Wilfrid Laurier, complaining of the lax inspection of immigrants arriving at Canadian ports, which accounts for the presence of foreign sufferers from tuberculosis at the Toronto Free Hospi-

tal for Consumptives and the Muskoka Free Hospital for Consumptives. The letter contains the following:

"Of the 243 patients treated in the Muskoka Free Hospital during the past year, 83—one-third of the number—were of foreign birth. An analysis of individual cases shows that a goodly percentage of these 83 left their homes knowing that they were afflicted with this disease, and yet were allowed to pass inspection at the immigrant headquarters at Quebec."

Several cases are quoted to substantiate these assertions. The letter further states:

"At the Toronto Free Hospital, near Weston, only 50 per cent. of the number cared for were born in Canada, 35 per cent. came from Great Britain and Ireland, 2.9 per cent. from other British possessions, 11.2 per cent. from foreign countries."

In many cases the history showed that they had been advised to come to Canada, because the bracing climate of this country was beneficial to persons suffering from pulmonary tuberculosis.

The letter further charges laxity of immigrant inspection at this side of the Atlantic, and something much worse at the other side. The detailed evidence to hand shows, it says, that this country is being made a dumping-ground for persons afflicted with tuberculosis and other diseases. Request is made that steps be taken immediately to prevent the embarkation for Canada of any immigrants afflicted with pulmonary or contagious diseases of any kind, and the enforcement of so rigid a system of inspection of all immigrants entering Canada as will insure the immediate return upon the transportation lines by which they arrive of all persons who are found diseased, or from any cause physically or mentally unfit to become useful and thrifty citizens.

The statistics quoted in this letter would be more convincing if it were shown that all, or a considerable number, of the foreigners treated at the consumption hospitals were recent arrivals. Some of them may have been in good health on their arrival, and may have developed tuberculosis owing to the well-known etiological factors, which operate here as well as in other lands. Assuming, however, that the greater number of the foreigners treated at these sanitaria were recent arrivals in Canada, the fact would go to prove that the system of examining immigrants entering Canada is, to put it mildly, not quite perfect. The Cana-

dian regulations call for the segregation, hospital treatment and deportation of immigrants suffering from incurable diseases. Medical examiners cannot diagnose every case of tuberculosis or Bright's disease while a shipload of immigrants are passing before them from the ship to the waiting railway train. If an immigrant is able to walk without showing obvious signs of physical decrepitude, he is accepted as a future citizen of Canada.

There is no adequate inspection of immigrants at Canadian ports to protect this country against the acceptance of the mentally and morally oblique—the degenerates, or the criminals of the Old World.

We understand that a large sum of money—$300,000—has been expended by the Canadian Government in erecting quarantine hospitals at Quebec, Halifax, St. John and Winnipeg. Of course, there is an annual disbursement for the maintenance of these hospitals. Theoretically, immigrants detained at Canadian quarantine hospitals pay for their treatment and maintenance in them out of their own resources. Frequently, their means are too limited to enable them to do so.

The proper place to stop the advent of undesirable immigrants to Canada is at the port of embarkation. Each immigrant should carry a passport, certifying that A. B. is physically, mentally and morally sound. Inspection should be done by Canadian physicians, responsible to the Canadian Government. A formal inspection of immigrants at Canadian ports of arrival would answer. The Canadian quarantine hospitals would have little to do, except caring for occasional cases of acute contagious diseases. J. J. C.

PROF. SCHOTT'S VISIT TO TORONTO.

In accordance with an invitation to lecture in Toronto, Professor Schott, on the evening of January 21st, in the New Medical Building of the University of Toronto, spoke on the treatment of chronic diseases of the heart. He mentioned that the former method of treatment with rest and digitalis had been inadequate. Even the many newer remedies, of which he described the principal ones, were either unsatisfactory or accompanied with

unpleasant or even toxic effects. This compelled medical men to look for other means, and led to what are known to-day as the physical methods. These are principally the Swedish and Oertel's methods, as well as the balneological gymnastic treatment devised by the lecturer, conjointly with his late brother, August Schott.

Professor Schott spoke first of the Oertel cure, which has been a powerful incentive to renewed research. Still, in the main, Oertel's theory concerning the limitation of the supply of liquids proved to be erroneous. Mountain climbing is only notable in a limited number of cases of heart affections, and should really be resorted to towards the end and not at the beginning of the treatment.

The Swedish method is principally used in the form of Zander's mechanical contrivances. These do not, however, render the patient independent either of his momentary physical condition or of continued medical supervision. They are useful, nevertheless, wherever the cost of the apparatus and that of running them do not come into consideration. Of course, it should never be overlooked that with Zander's machinery the patient is dependent upon time and locality, and, above all, that it is a very difficult matter to attain a precise degree of individualization in the measurement of the resistances.

The lecturer then described his balneological-gymnastical treatment. He began by depicting the physiological action of the baths, their influence upon the heart, the vascular system, blood-pressure, the baths and gymnastics are tonics for the weakened heart. The baths work by means of the sensory, gymnastics by means of the motor nerve-treatments. Professor Schott described the course of the bath cure in heart diseases. The treatment begins with the use of simple saline baths, especially in severe cases. The strength of the baths is then gradually and systematically increased until finally the strongest mineral water, with the highest percentage of natural CO_2 is resorted to.

The lecturer gave then full details about the Nauheim baths, their solid and gaseous (CO_2) constituents, temperature, duration, etc. Professor Schott then spoke of the mode of preparation of artificial Nauheim baths, as devised by his late brother and by himself. He also pointed out how their usefulness may be imperiled through not properly preparing them.

Gymnastics are used in two forms: resistance gymnastics and exercises with self-resistance. In the first of these forms the resistance is offered by an assistant; in the second, by the tensifying (contraction) of antagonistic groups of muscles on the part of the patient himself. Professor Schott described the manner of performing these exercises, and also the cautionary measures with they require. He further mentioned massage, the application of heat and cold, the use of electricity and the diet.

In conclusion, Professor Schott demonstrated a large number of drawings, showing heart limits, radiograms, pulse-tracings, with relative blood-pressure. In this way he illustrated the results which may be obtained in cases of heart disease by the balneological-gymnastical treatment.

SPECIAL MEETING OF THE TORONTO MEDICAL SOCIETY —PERFORATION IN TYPHOID FEVER—DR. OSLER'S ADDRESS ON "A TORONTO ACADEMY OF MEDICINE."

A LARGELY attended special meeting of the Toronto Medical Society was held in the new Medical Building, 8 p.m., December 18, 1906, the president, Dr. Rudolf, in the chair. Invitations had been issued to all the physicians of the city, to the teaching staffs of the University of Toronto, and to the medical students, so that the hall was crowded.

A paper was read by Dr. A. McPhedran, on "Perforation in Typhoid Fever." In his description of the clinical picture presented by a patient suffering from the lesion in question, the speaker attached special importance to abdominal pain, sudden in origin, and continuous, though not necessarily severe in character. According to his observation, perforation had occurred in several cases of typhoid fever which had not been considered to be of a severe character. When the lesion was diagnosed he favored an early operation for its relief. Dr. Osler, Regius Professor of Medicine, Oxford, concurred in the remarks made by Dr. McPhedran. He deplored the prevalency of typhoid fever in Canada; he thought that this disease was by no means so common over in England as it appeared to be in Canada.

Mr. I. H. Cameron, who had done several abdominal operations for the relief of typhoid perforations occurring in patients of Dr. McPhedran, remarked on the infelicity of being called upon, as a mere surgeon, to perform this severe and risky operation so strongly advised by his medical colleague. He showed that a surgeon cannot, in many cases of perforation, prevent a fatal result, because, to give one reason only, even though the perforation in the bowel be sutured, another ulcer may be on the point of opening into the peritoneum, and may open subsequently, as had occurred in one of the cases in which he had operated, at Dr. McPhedran's request.

Dr. Rudolf then called upon Prof. Osler to give his promised address on an Academy of Medicine in Toronto. Dr. Osler, who was enthusiastically received, began by remarking that the principal centres of medical life in a city are: the medical school, the hospital, the medical library, the medical society and the medical journal. His subsequent remarks were directed, almost exclusively, to the medical library and the medical society. He strongly advocated a union of the existing medical societies of Toronto, and he thought that such a union would help to increase the strength and influence of the medical profession in this city. The Toronto Academy of Medicine might, he thought, be framed after the model of the Academy of Medicine of Philadelphia, in which the various specialties into which medicine is subdivided are presented as sections of one large medical union or academy. A passing allusion was made to the Medical Academy of Paris, to that of Dublin, and the speaker also said that it was contemplated to merge the existing medical societies of London into one great academy.

Referring to the Ontario Medical Library, he had learned that last year there had been 970 readers; that the library contained 6,000 volumes, with a choice collection of medical journals, and that, speaking generally, it was in a flourishing condition. He thought that efforts should be made to increase its membership. There were 450 physicians registered in Toronto, 300 of whom, at least, ought to be members of the Academy of Medicine. With such a membership the Academy would be self-sustaining. A fee of $25 was charged for membership in the New York Medical Library; in the Medical Library of Philadelphia $20 was the

charge; in the Baltimore one, $10. Whatever sum was thought to be a suitable one for Toronto physicians to pay should be adopted. If active members of the Ontario Medical Library would canvass their medical friends, many more names would be speedily added to the list of members. The physicians most interested in the Academy would be the young beginners. During the first fifteen years of professional life, physicians should spend a good deal of their time in the Medical Library. Men paying forty visits a day could not, of course, do likewise. The men, who should pay most to support the Academy, were the specialists, the consulting physicians and surgeons, who depended on the general practitioners for their work. He stated, that he would be one of five persons, who would give $100 a year, for five years, towards the support of the Toronto Academy of Medicine, or a smaller sum, if a larger number of men would subscribe.

Needless to say, Dr. Osler's address was listened to very attentively. A cordial vote of thanks to the lecturer was moved by Dr. Albert A. Macdonald, seconded, at the request of Dean Reeve, by Dr. Jas. H. Richardson, and carried unanimously.

J. J. C.

MEDICAL INSPECTION OF PUBLIC SCHOOLS A NECESSITY.

We hope that the opinion, recently expressed at a meeting of the Toronto Branch of the National Council of Women, that medical inspection of schools should be one of the gifts that the "powers that be" would grant during the year 1907, will be substantiated. May this necessity cease to be a wished-for good, and, ere many moons, become an accomplished fact. Listening to the papers read that evening, to the address of Dr. Helen MacMurchy, and to the discussion so tactfully led, and the finality of the summing up of the whole matter by the president, Mrs. Torrington, in these words: "Let us go to the Government and ask. Who can resist the mothers," we were indeed impressed with the importance of the question of the hour. We have reproduced the papers in this issue, and hope that our readers will carefully peruse them. At that meeting, someone said there were about thirty thousand school children in our city, a whole little city of little people. The teachers in

our public schools are doing noble work, but few of them have been able in life's hurried years of study to add more than a knowledge of the general principles of hygiene. Therefore it would be indeed difficult and almost unreasonable to expect them to diagnose a case of fever or measles, etc., in its incipient stages; it is surely enough that they insist on cleanliness both in surroundings and in the persons of their pupils. Should the teacher happen to be a Christian Scientist, it certainly would not be within her province to recognise any evidence of disease at all! The note of warning has not been sounded any too soon by our Canadian mothers, for the "foreign element" is creeping in so rapidly, and with it the often fixed prejudice against stringent preventive measures necessary to protect against the spread of disease among the pupils in our schools—vaccination, for instance, and even inspection of pupils (foreigners), as in New York recently; so here, some day, the teacher may find herself helpless against the fury of a mob of parents who feared harm instead of healing being administered to their offspring. In such cases, a Medical Inspector clothed with authority could step in, insist quietly, and conquer such ignorance with speed and without any ill-feeling being afterward manifested against the teacher. In asserting the authority vested in him he would also maintain the dignity of power of a Country to whose laws all inhabitants must submit, and a Nation which only wants those to be absorbed into its life who can be transformed into sturdy, intelligent Canadians.

W. A. Y.

IS THERE TO BE A JOURNAL OF THE CANADIAN MEDICAL ASSOCIATION?

In the draft of the proposed new constitution and by-laws of the Canadian Medical Association, presented at the Toronto meeting, August 20th, 1906, it is provided that the Finance Committee "shall have charge of the publication of the official journal of the association, and of all published proceedings, transactions, memoirs, addresses, essays, papers, programmes, etc., of the association."

In conversation a prominent officer of the Canadian Medical

Association recently expressed his opinion: that no medical journal published in Ontario was known outside of this Province. This remark chimes in with one credited to another member of the Canadian Medical Association, viz., "that to publish an article in a Canadian medical journal seemed about tantamount to consigning it to the flames, or locking it up in a drawer."

The last rub is decidedly inane, for, if properly interpreted, it makes out that Canadian physicians, though residents of a country well supplied with fuel, feel called upon to burn journals containing the papers of their confreres. One of two things must, therefore, be true in the opinion of the author of this flamboyant remark: either the papers of Canadian physicians are worthless, or the readers of Canadian medical journals are unable to appreciate a good thing when they read it.

In reference to the first charge: that Ontario medical journals are unknown outside this Province, we say that, even if true, it would only prove that the medical journals of Ontario rise no higher than the source from which they spring, *i.e.,* the medical profession of this Province. This, however, would not be an adequate answer to so unpatriotic a charge. The status of Ontario medical journals in the world's market may be gauged in this way: read the references to articles written in the International Medical Annuals for 1901, 1902, 1903, 1904, and observe what Canadian journals are mentioned. These alphabetically arranged articles are written by chosen men, who, by a system of careful culling, obtain the materials for their special articles from the current medical literature of the world. The numbered references at the bottom of each of these articles are the names and dates of the medical journals from which the writers quote. This work is published annually in England and in the United States. In 1901 there was one reference to the *Dominion Medical Monthly,* and one to the *Montreal Medical Journal.* In 1902 there were no Canadian references. In 1903 there were seven references to the *Montreal Medical Journal* and three to the Canadian Journal of Medicine and Surgery. In 1904 there were four references to the Canadian Journal of Medicine and Surgery and two to the *Montreal Medical Journal.* Obviously, therefore, during the years mentioned, two Ontario medical journals were recognized and utilized by compilers of the new

and original in the world's market of medical literature. Had some Ontario doctors, who could have done it without shortening their lives, burned the midnight oil, and contributed their gold and pearls to the medical journals of this Province, more frequent references to Canada would have appeared in the world's medical clearing-house. The sails may be trim and the ropes taut; but able seamen must man the yards, if the ships of any country are to make a creditable appearance among the navies of the world.

It occurs to us that before establishing an association journal the first step to take would be to get a report from a committee of ways and means, who would be expected to show the undoubted sources from which financial support of the new venture is to be got. In Canada there are some 6,000 physicians. Suppose that one-fourth of that number, 1,500 men, became bona-fide subscribers to the association journal at an annual fee of $5. This would provide a capital of $7,500, all subscriptions paid up. Now a monthly issue of 2,000 copies of the association journal would cost per annum about $3,000. An editor should get a salary of $3,000; a stenographer would receive a salary of $500, a book-keeper, $1,000; an organizer, who would push the association, collect subscriptions and canvass for advertisements, would be worth $3,000, not including travelling expenses; hire of an office, $500; total, $11,000, not including postage stamps, telegrams and other incidentals, which would show a deficit of $3,500 in a year's business.

It is clear, therefore, that the management would require a rest account to draw from during the first five years of their journalistic career, until the association journal would acquire an established market value among advertisers. Are the officers of the Canadian Medical Association prepared to supply such a rest account? If not, where is the money to come from?

Even if one of the Toronto medical journals were to hang out the white flag and surrender to the Canadian Medical Association, three independent medical journals would remain. A good deal of money and effort has been expended in placing them where they are; they are not likely to extinguish their lights at the bidding of any association; to buy them out would require a good deal of money.

Then, again, this sudden access of zeal to bring about the

establishment of an association journal, though well meant, seems inopportune, in the light of the fact that publication of the transactions of the Canadian Medical Association in the form of a paper-covered volume, though regularly discussed at association meetings could never be accomplished, owing to lack of funds. If the Canadian Medical Association had successfully published an annual volume of transactions during five years for a fee of $3, membership included, there would be some justification for their forging ahead and demanding an annual fee of $5.

At present, and for many years back, the papers of the Canadian Medical Association have been published in the medical journals of this country, receiving thereby a considerable circulation, without anxiety, bother or expense to the Executive of the association.

On the other hand, we are free to confess that there would be an advantage, a prestige at home and abroad, in the publication of an association journal. The necessary funds, however, must come from some source, and the members will certainly not care to assess themselves for more than the annual fee.

We hold no brief for others, but we can say, without fear of contradiction, that the Ontario journals of medicine do not fear the competition of an association journal. In case that an association journal should be started, the independent journals would suffer from a dearth of original papers written by Canadian physicians, and would be obliged to go abroad for some of their original matter. On the other hand, papers read by members of the association would appear in one journal with a restricted circulation, instead of in one, two or three independent medical journals, issued at possibly different dates. Canadian physicians should be loyal to the Dominion Medical Association; but they should stand together in more than one respect and support the really fine Canadian medical journals at present in existence. To the Executive of the association we would say, "Wisely and slow: they stumble, that run fast." J. J. C.

EDITORIAL NOTES.

At a meeting of the Medical Society of the Hospitals, Paris, November 23, 1906, Drs. P. Marie and F. Moutier reported an observation made by them conjointly on a male patient, 52 years of age, who had been attacked, August, 1904, with right hemiplegia and aphasia. The hemiplegia persisted, especially in the right arm. The patient showed marked symptoms of Broca's aphasia; that is to say, difficulty in articulation, total inability to read; as for writing, he could copy printed matter in a running hand. At the autopsy no lesion of the third frontal convolution was found, but there were some very small patches of softened tissue in the first and second temporal convolutions. A horizontal section of the cerebrum showed that the third frontal convolution was quite sound, but a well-marked cyst was found in the lenticular zone. Another area of softening in Wernicke's zone destroyed the deep white substance, but spared the convolutions and their cortex. Drs. Marie and Moutier thought that this case was quite comparable with the one reported by Dr. Souques (see C. J. M. S., January, 1907, p. 46), save that in the latter case the cortex of Wernicke's zone was diseased, while in the case reported by them the white substance of this part of the cerebrum was particularly affected. In their opinion, difference of location in the respective brain lesions was the cause of the clinical differences exhibited by the patients. In fact, in the case reported by Drs. Marie and Moutier the patient, during his illness, had at his command a more extensive vocabulary than Dr. Souques' patient, this vocabulary being at times disordered by lapses into partial aphasia and a jargon of misplaced words.

Inspection of the Wells of Dairies Necessary.—The causation of an outbreak of typhoid fever by the drinking of unboiled water taken from contaminated wells is well known. It is not so well known that the use of such water to wash milk pails and utensils may cause an outbreak of typhoid fever. In the Chicago Bulletin of the Health Department, week ended December 22, 1906, the following appears: "Further investigation showed that all the families having the twenty-two cases of fever (Mont Clair

outbreak) obtained their milk supply from one local dealer, whose son had an attack of typhoid fever two years ago. The well on this place is only forty-two feet from an outhouse, the vault of which was full, level with the ground, at the time of examination. Although the house was supplied with city water, there were indications that the well water was occasionally used to wash the milk pails and utensils." It is quite certain that, even if the water supply of Toronto were filtered, yet an outbreak of typhoid fever might occur in this city, through milk pails washed with contaminated water from a well in the County of York. The Toronto Board of Health should be in possession of the latest reliable information about the well of every dairy which sends milk to this city.

Food Inspection in Canada.—A bill introduced by the Minister of Agriculture during the present session of the Dominion Parliament is intended to provide safeguards for an adequate system of food inspection in Canada. Beginning with the inspection of live animals intended for food, the official supervision is made to apply to the dressed carcases and to the processes of canning the meat. A penalty of one year's imprisonment may be imposed on any person who sells or offers for sale, transports or exports a carcase or portion or product of a carcase, known to be unhealthy or unfit for food. Meats passed by the inspectors are to be stamped, and the inspectors may refuse to stamp goods not prepared under proper conditions, or may close up an unsanitary canning establishment. Supplies of fish and vegetables, though not to be stamped, must be clean and sound. Although the Canadian Government takes only an exceptional interest in public health legislation, it seems that for some reason, a commercial one perhaps, interest is to be taken and public money spent in maintaining the soundness of the meats and the purity of the canned goods put up in this country. In reviewing "A Handbook of Meat Inspection," by Dr. Robert Ostertag, in the October (1906) number of C. J. M. S. we said: "A beginning of bona-fide meat inspection should be made in the larger cities of this Province, in some of which there are several concerns engaged in the production of meat products, as well as large supplies of meats for domestic use. Dr. Ostertag's fine book, in its English dress, would then become the meat inspector's

handbook." There is one little particular which should not be forgotten by the committee in charge of the bill: to provide that the date of preparation shall in every case be stamped on the can. How long properly canned foods will remain in good condition can hardly be determined, but the evidence at hand points to indefinite preservation. Tyndall mentions tins in the Royal Institution that had remained in good condition sixty-three years. All the same, the purchaser should be permitted to know the age of the canned goods he buys. Cold storage is an excellent method of preserving meat and fish, neither abstracting any constituent of the food nor adding any foreign matter, neither imparting a new taste nor altering the natural flavor, causing neither a loss of nutriment nor diminished digestibility, and on the withdrawal of the cold the food is left in its original condition.

The Association of Military Surgeons of the United States.—Brevity being the soul of wit, and very commendable in a soldier, *The Military Surgeon* appropriately relieves the old guard, *The Journal of the Association of Military Surgeons of the United States.* This journal, which has been in existence during the past six years, is, as we learn from its editor, Major James Evelyn Pilcher, the pioneer military medical journal in the English language. Its success in bringing to the notice of surgeons a reliable body of military medical literature is creditable to the editor, and speaks well for the literary activity and scientific knowledge of the military surgeons of the United States. The C. J. M. S. heartily greets *The Military Surgeon*, as the adequate exponent of a highly educated class of medical men.

Wood Alcohol as a Poison.—Wood alcohol (methyl alcohol) is very toxic, and numerous cases of fatal poisoning have been traced to its use. "Pure wood alcohol," says Butler, "is colorless, limpid, of a peculiar odor, reminding one of alcohol and acetic ether, and a warm taste. Owing to its cheapness and freedom from tax, it is used as an adulterant of grain alcohol." The symptoms of poisoning by this agent are: first, slight intoxication; later, severe headache, pallor, gastric pain, gastro-intestinal irritation, retching, dilated pupils, partial or complete blindness, paralysis of the legs, dyspnea, delirium, collapse, with stertorous

breathing and unconsciousness. Toxic amblyopia is a constant feature, and is due to retro-bulbar neuritis. It has been known to follow a dose of 2 to 5 drachms. A cystitis is frequent. The fatal dose is probably from 4 to 8 ounces. The post-mortem changes are: ecchymosis in the stomach and intestine, with congestion of the kidneys. The prolonged action of this poison is thought to be due to the formation of formates, which are excreted very slowly. In a paper read at the Toronto meeting of the British Medical Association, Casey A. Wood, M.D., Professor of Clinical Ophthalmology, University of Illinois, makes a strong plea in favor of prohibiting, or rendering unprofitable, the manufacture or sale of wood alcohol in Canada. This has been accomplished in the United States by the adoption of a "denatured" alcohol bill. He hopes that Canada will join Great Britain, Germany, the United States and other countries in using cheap untaxed, denatured grain alcohol for light, fuel, solvent and power-producing purposes. If grain alcohol for these purposes were made cheap, the manufacture of wood alcohol would become unprofitable, and would cease. He says that grain alcohol could be distilled and sold at a profit for light, fuel, varnish-making and other industrial purposes for less than the factory cost of producing deodorized or even the so-called "refined" wood alcohol. Owing to the fact that in several cases loss of life has occurred and that in other cases total blindness resulted from the use of wood spirits, it would be for the benefit of the public health in Canada if denatured grain alcohol were employed for industrial purposes instead of wood spirit.

Asystole in Association with Tuberculosis.—Asystole, or incomplete ventricular contraction, so that the ventricles are not completely emptied of blood, is met with in degeneration and asthenia of the cardiac muscles. In a paper read before the Medical Society of the Hospitals, Paris, December 14, 1906, Dr. Barié traces the history of asystole in tubercular cases. He shows that this condition is very frequent in fibroid phthisis, but that it may be noted during the course of chronic ulcerative phthisis, in three principal conditions: (1) there may be valvular lesions associated with chronic phthisis; (2) chronic phthisis is very frequent in individuals having contraction of the pulmonary artery; (3)

asystole may depend on the digestive disorders frequently met with among consumptive patients, and is then of reflex origin.

Exhibition of X-ray Plates at the Meeting of the Toronto Medical Society.—An evidence of the rapid strides made in skiagraphy was the exhibition of the X-ray plates made by Dr. S. Cummings at the January 4 (1907) meeting of the Toronto Medical Society. For about an hour, plates, exhibiting lesions of various characters, succeeded each other, running comments being made by the exhibitor. Perhaps the most striking plates were those showing vesical, ureteral, renal and prostatic calculi. Not less interesting were skiagrams of tubercular lesions of the lungs. The curious circumstance that a patient who was receiving treatment for an empyema, which had been evacuated and drained, complained that he tasted formaldehyde after the dressing of his abscess, was shown in a plate to be due to the fact that the patient's empyema communicated with one of his bronchi. The fallacy founded on the use of the surgical probe in locating a bullet after a gunshot wound of the skull was shown in a plate taken from the head of a lad who had been shot, the bullet passing through one mastoid process and seeming to have made an exit through its fellow of the opposite side. A skiagram revealed the bullet in a totally unexpected position in the anterior portion of the lad's brain. An incision over the os frontis, followed by the application of a trephine, enabled the surgeon to remove the bullet, and the patient recovered. Exostosis, sequestrum, exfoliation of bone after periostitis, tubercular and syphilitic disease of bone, arthritis deformans, bony ankylosis, fibrous ankylosis, green-stick fracture, simple fracture were also represented. Several pictures exhibiting arterio-sclerosis of blood vessels were shown. The advantage of the X-ray in enabling a physician to clear up an exceedingly obscure case was revealed by a skiagram showing gall-stone calculi. Skiagrams, well taken, of course, are known to be of great utility in surgical practice, enabling the surgeon to locate foreign bodies, pieces of loose bone, calculi, etc., as well as showing the conditions of fractured bones or dislocations before or after treatment. The utilization of the skiagram in revealing the causes of obscure diseases of the viscera, above and below the diaphragm, is not so generally known, or, if

known, not so much appreciated. From what was seen of Dr. Cummings' work, it is our opinion that, in chronic or obscure cases at least, the surgeon or physician should let in the light, see what the disease is, and then act accordingly.

PERSONALS.

Dr. W. S. Harrison was elected a member of the Board of Control on January 1st, and Drs. B. E. Hawke and John Hunter to the Board of Education.

Dr. Geoffrey Boyd, 167 Bloor Street East, announces to the medical profession that he is relinquishing general practice, and after the New Year will devote his attention to the treatment of diseases of the ear, nose and throat.

Obituary

VERY SAD DEATH OF DR. JAS. HENDERSON, COBOURG.

Word was received in Toronto, on December 21st, of the accidental death near Cobourg of Dr. James Henderson, a leading physician of Cobourg and well known in Toronto.

Dr. Henderson was driving home at half-past twelve in the morning in a blinding snowstorm, when, in attempting to cross the Grand Trunk tracks at the Ontario crossing, he was struck by the fast Montreal express leaving Toronto at 10.30. Dr. Henderson was alone when the accident occurred. The locomotive struck the front of the cutter, the horse having apparently got clear of the tracks. The engineer of the train, on arriving at Cobourg, reported have run into something, and a search party was sent out. Dr. Henderson was found in his fur coat and robes, quite dead, but with no visible injuries except a bruise on the temple. The body was taken at once to Cobourg, where news of the accident occasioned deep regret.

Dr. Henderson was a bachelor, a gold medallist of McGill, and was under forty. He formerly practised at Grafton. He was for a time a partner of the late Dr. Douglas, of Cobourg, who also met with a sudden death, expiring from heart failure while out driving last summer.

News of the Month.

CONGRESS OF CLIMATOTHERAPY AND URBAN HYGIENE.

The third Congress of Climatotherapy and Urban Hygiene will hold its meeting, during the Easter vacation, April 1-10, 1907, on the French Riviera (that part between Hyeres and the Italian frontier) and in Corsica. The sessions will be held at Cannes, Monaco, Mentone and Ajaccio, but all the towns and stations on the Mediterranean coast are included in the programme—Cannes, Nice, Monte Carlo, Mentone, Hyeres, Antibes, Grasse, St. Raphael, Juan-les-Pins, Beaulieu, Cap Martin, Thorenc, etc. The congress will last about one week on the French coast, and will finish in Corsica.

The success of the two previous congresses, held at Nice in 1904, and at Arcachon in 1905, is well known. Without doubt, the third meeting will be in no way outdone by its predecessors. Its programme will be of the best. The Organizing Committee are busy, the principal points being already settled. Many towns have subscribed important sums, Cannes, Mentone and the principality of Monaco having promised large subscriptions. Municipalities and corporate bodies are preparing to rival with each other to assure the success of the congress, and to offer a brilliant reception to the visitors—fetes, banquets, excursions. A reduction of 50 per cent. will be asked for on all railways and steamboats, and important reductions will be given in all the hotels.

Permanent Committee—Messrs. Calmette, Director of the Pasteur Institute, Lille, member of the Academy of Medicine; Chantemesse, Professor in the Medical Faculty of Paris, member of the Academy of Medicine; Guinon, Physician of the Paris Hospitals; Huchard, Physician of the Paris Hospitals, member of the Academy of Medicine; Renaut, Professor in the Medical Faculty of Lyons, member of the Academy of Medicine; Renon, Professor (Fellow) in the Medical Faculty of Paris, Physician of the Hospitals.

Congress Officials—President, Dr. Calmette, of the Academy of Medicine, Director of the Pasteur Institute, Lille; Vice-Presidents, Dr. de Nabias (Professor in the Medical Faculty of Bordeaux), Dr. Grasset (Professor in the Medical Faculty of Montpellier, member of the Academy of Medicine), Dr. Pitres (Professor in the Medical Faculty of Bordeaux, member of the Acad-

emy of Medicine), Dr. Bourcart (Cannes), Dr. Vivant (Monte Carlo); General Secretary, Dr. Verdalle, Physician of the Bordeaux Hospitals, 1 Boulevard d'Alsace, Cannes; General Treasurer, Dr. Bienfait, Villa Marie Louise, Boulevard d'Alsace, Cannes; Assistant Treasurer, Dr. Faure, 19 Rue Hermann, Cannes. With the General Secretary of the Congress, Dr. Verdalle, are two local General Secretaries, Dr. Didier for Mentone and Dr. Giocanti for Ajaccio. Secretaries, Dr. Josserand, Rue Jean de Riouffe, Cannes; Dr. Lhuillier, Boulevard d'Alsace, Cannes.

Questions for Consideration—Chronic diseases of the respiratory organs on the French Riviera, especially in Cannes and its environs; paper by Dr. Chuquet, Cannes. Adenopathies and local tuberculosis at Cannes; paper by Dr. Bourcart, Cannes. Nervous diseases on the Mediterranean coast; paper by Dr. Sauvage, Cannes-le-Cannet. Treatment of these diseases on the coast by physiotherapy; papers by Drs. Bonnefoy and Josserand, Cannes. Hygiene at Mentone; paper by Dr. Tartarin, Mentone. Heliotherapy, by Dr. Monterris, de Sylvabelle. The dust on the roads of the Mediterranean coast; papers by Dr. Chaboux, Mentone, and Dr. Gugglielminetti, Monte Carlo. Hygiene in the Principality of Monaco; paper by Dr. Vivant Monte Carlo.

Fee for the Congress, including the volume of Transactions of the Congress, 20 francs, $4; members of the families of Congressists (wife, unmarried children) and medical students, 10 francs ($2), without the volume of Transactions. The fee should be sent in advance by postal order or certified cheque to Dr. Bienfait, General Treasurer of the Congress, Villa Marie Louise, Boulevard d'Alsace, Cannes, France.

Any other correspondence should be sent to Dr. Verdalle, General Secretary of the Congress, 1 Boulevard d'Alsace, Cannes, France.

The French language will be used; other languages may be used exceptionally by permission of the President.

ITEMS OF INTEREST.

Ottawa Medico-Chirurgical Society.—The Annual Dinner of the Society was held on Thursday evening, January 3rd, in the Russell House, Ottawa. A most enjoyable time was spent.

"The Canadian Nurse" now a Monthly Magazine.—*The Canadian Nurse* is now a monthly journal, its first issue as such coming out last month. The January issue is a most creditable one, and we take this opportunity of congratulating the editor-in-chief and collaborators upon the result of their work. We under-

stand that the circulation of *The Canadian Nurse* is rapidly extending, and we bespeak for it the support of the nursing profession all over the country.

Additions to the Laboratory Staff of H. K. Mulford & Co.—Arthur P. Hitchens, M.D., succeeds J. J. Kinyoun, M.D., as director of the biological laboratories of H. K. Mulford Company. Dr. Hitchens has been connected with the Mulford biological laboratories for the past eight years, during the greater period of that time having had personal charge of the preparation of antitoxins and curative sera. He is well qualified to conduct scientific work connected with the production of antitoxins and biological products. W. F. Elgin, M.D., continues in charge and direction of the Mulford vaccine laboratories. E. D. Reed, M.D., of Ann Arbor, Mich., has been engaged to direct research work, particularly in pharmacology and physiological chemistry.

American Physio-therapeutic Association.—Physicians who are interested in the study and legitimate practice of the physical (drugless) therapeutic methods, notably electro-therapy, photo-therapy, mechano-therapy, hydro-therapy, suggestion and dietetics, are invited to join the American Physio-therapeutic Association. Address the Secretary, Dr. Otto Juettner, No. 8 West Ninth Street, Cincinnati, Ohio. The officers for the ensuing year are: President—Dr. H. H. Roberts, Lexington, Ky.; Secretary—Dr. Otto Juettner, Cincinnati, Ohio; Treasurer—Dr. Geo. H. Grant, Richmond, Ind.; Executive Council—Drs. W. F. Klein, Lebanon, Pa.; Jas. Hanks, Brashear, Mo.; J. W. Unger, West Point, Miss.; Chas. S. Northen, Talladega, Ala.; R. W. Gibbes, Columbia, S.C.; S. J. Crumbine, Topeka, Kans.; F. L. Keeler, Perry, Okla.

For the Care and Treatment of Neurasthenics.—Some months ago a ward for the care and treatment of neurasthenics was opened in connection with the Toronto General Hospital. It is modelled somewhat on the lines of the Albany Hospital ward for the insane, although much more limited in its application to cases of actual insanity. The idea is to treat cases in what may be the early stages of mental alienation, or cases of functional nerve trouble. There is no provision for the treatment of the acute insane; indeed, the structural requirements for such a class of patients did not exist in the building adapted for the ward for neurotics. The ward is pleasingly decorated, and in many respects will prove a valuable addition to the resources of the general hospital. The ward is under the direction of Dr. Campbell Meyers, and Dr. E. C. Burson is in immediate charge. Dr. Meyers is well known in Toronto as a successful neurologist of

large experience.—*From the American Journal of Insanity, October,* 1906.

The Ontario Medical Association.—The Committee on Papers and Business for the current year is composed of the following members, under the chairmanship of Dr. D. J. G. Wishart: Drs. Ingersoll Olmsted, Hamilton; N. W. Woods, Bayfield; W. J. Bradley, Ottawa; A. F. Tufford, St. Thomas; Angus Graham, London; and H. B. Anderson, R. D. Rudolf, J. S. Hart, T. F. McMahon and F. N. G. Starr, of Toronto. It is proposed to reinstate the plan of sectional meetings at the next annual gathering, which will be held a week earlier than usual—May 28, 29 and 30, 1907. The committee have secured the promise of Dr. Crile, of Cleveland, to deliver the address in Surgery. Dr. Crile is the Professor of Clinical Surgery at the Western Reserve University. It is intended to secure, if possible, some prominent physician in the United States to give the address in Medicine. While it is impossible as yet to speak definitely, it is hoped that we may have with us some one of the English physicians who will attend the meeting of the American Medical Association, which will open a few days later at Atlantic City. The committee has partially drafted a programme which will surely interest every physician of the Province.

The Final Examination of the Ontario College of Physicians and Surgeons.—The following are the results of the final examination of the Ontario College of Physicians and Surgeons, held last autumn: J. B. Austin, Brighton; E. W. Allin, Bowmanville; W. C. Brown, Belview; C. W. Becker, LeGrange, Ill.; T. W. Blanchard, Appleby; R. M. Bucke, London; D. H. Boddington, Leamington; R. B. Burwell, Shedden; W. M. Carrick, Hamilton; R. L. Clarke, Hamilton; F. F. Carr-Harris, Somerset Vale, N.B.; J. F. Dunn, Elgin; W. P. Dillon, Ottawa; A. C. Driscoll, Trenton; G. A. Durnin, Westhope, Dakota; J. R. Gunne, Kenora; W. L. Gilbert, Picton; D. A. Graham, Ivan; F. V. Hamlin, Allandale; J. R. Irwin, Toronto; R. M. Johnstone, Grassie; J. D. Loudon, Toronto; J. A. Labrosse, St. Eugene; A. E. Mahood, Kingston; S. A. Moran, Rednersville; J. I. Morris, Hamilton; S. F. Millen, South Woodslee; A. E. Murphy, Phelpston; F. B. Mowbray, Thamesville; A. L. McMurtry, Bowmanville; C. McMane, Toronto; Margaret McAlpine, Toronto; J. McAndrew, Toronto; J. A. McKenna, Toronto; C. E. Preston, Ottawa; C. Powell, Barrie; J. J. Robb, Battersea; E. G. Rawlinson, Toronto; T. D. Rutherford, Delmer; H. E. Schaef, London; E. H. Smith, Toronto; A. B. Smillie, Hensall; H. D. Thompson, Watford; L. A. Truman, Strathroy; F. R. W. Warren, Moose Jaw, N.W.T.; O. M. Wilson, Athens; A. G. Wallis, Humber.

The Physician's Library.

BOOK REVIEWS.

Modern Clinical Medicine. Diseases of Metabolism and of the Blood. Animal Parasites. Toxicology. Edited by Richard C. Cabot, M.D., Instructor in Clinical Medicine in the Medical School of Harvard University. An authorized translation from *Die Deutsche Klinik*, under the general editorial supervision of Julius L. Salinger, M.D. With one colored plate and fifty-eight illustrations in the text. New York and London: D. Appleton & Co. 1906.

This work contains a series of papers on the chief constitutional conditions, such as diabetes mellitus and insipidus, gout, obesity, over-nutrition and under-nutrition, the anemias, and methods of blood examination, by leading German writers such as Von Noorden, Naunyn, Gerhardt, Ebstein, Erlich and others. "The writers have wisely confined themselves for the most part to thorough discussions of certain points in each of the diseases considered, making no fatuous attempt to compress a huge subject into narrow limits. They have brought their subjects up to date and given frankly their personal views on the points at issue." The work as a whole is very valuable and will prove of great service to any physician. The translation, while good, would be much more clear if it had not followed the German quite so literally. A. M'P.

The Undertow. By Robert E. Knowles, author of "St Cuthbert's." Toronto, New York, etc.: Fleming H. Revell Company, publishers.

The author truthfully and strongly, and yet with many a touch of dry humor or beauty of description, weaves his web of life around a family circle whose head is the staunchest of old Scotch Presbyterians, transplanted from his native soil to God's own country—Canada. But unfortunately he raised a thistle, in the shape of a younger son, who became a minister; he was tossed by every wind, and generally a very weak character, ready in his littleness and self-conceit to mistrust the best and most beautiful of wives. The reader cannot forgive the author

for sacrificing his heroine and letting her life be broken just to reform such a milk-and-water fellow as he was. If the game of life is played fairly, surely the game should be worth the candle. In its description of places visited, and its oft-told love of Mother Nature lies the charm of the book. W. A. Y.

Sex and Character. By Otto Weininger. Authorized translation from the sixth German edition. London: William Heineman. New York: G. P. Putnam's Sons. 1906.

This is a book that ought never to have been written; being written, it ought never to have been published; being written and published, it ought not to be purchased or read. The originality, the erudition, the earnestness and the manifest honesty of its author offers but small excuse for the distorted and monstrous views of humanity—that is, of woman, the best part of humanity —which he entertains and tries to teach. Listen to this: "The disposition for and inclination to prostitution is as organic in a woman as is the capacity for motherhood" (page 217); or this: "After a long analysis, then, it has been found that there is no exception to the complete absence in woman of any true, inalienable relation to worth" (page 279). The most despicable thing that Schopenhauer in his moments of greatest spleen ever wrote about women is outdone by this youth, who before he was twenty-three made an attempt to construct on a logical and philosophical basis a scheme for the relation of the sexes. That his arguments rest on a basis wholly false will be made clear by this quotation: "It has been exhaustively proved that the female is soulless, and possesses neither ego nor individuality, personality nor freedom, character nor will" (page 207). It is a relief to find something that can be said to the credit of the author after all this. He committed suicide after writing this book. Had he done so before writing it, our obligation to him would have been markedly increased. One turns with relief from writing such as we have been reviewing to Goethe's conclusion: "The woman's soul leads us upwards and on." N. A. P.

Chemistry, General, Medical and Pharmaceutical. Including the Chemistry of the U. S. Pharmacopeia. By John Attfield, F.R.S., M.A. and Ph.D. Edited by Leonard Dobbin, Ph.D. Nineteenth edition. Philadelphia and New York: Lea Brothers & Co. 1906.

It is no small honor for a text-book to reach its nineteenth edition, yet every student of chemistry knows that in this case the honor is well deserved. While Attfield's manual is a systematic treatise on the science of chemistry, yet it is written mainly

for the pupils, assistants and teachers engaged in medicine and pharmacy. It differs from ordinary works on general chemistry mainly in the fact that the chemistry of every substance having interest for students of medicine and pharmacy is noticed at more or less length in proportion to its importance, and the leading principles of chemistry are set forth with all attainable exactness. We are sure that this work deserves, and will still enjoy, a long period of popularity. A. E.

Photoscopy (*Skiascopy or Retinoscopy*). By Mark D. Stevenson, M.D., Ophthalmic Surgeon to the Akron City Hospital; Oculist to the Children's Home, Akron, Ohio. Octavo of 126 pages, illustrated. Philadelphia and London: W. B. Saunders Company. Toronto: J. A. Carveth & Co. 1906. Cloth, $1.25 net.

When one recalls the many works on Retinoscopy, Hartridge, Morton, Thorington, Jackson, and goodness knows how many others, one wonders where a new one can come in, yet after seeing Stevenson's one realizes that perhaps there was room after all. There is about it a certain air of the practical man which pleases.

J. M. M.

W. B. Saunders Company, of Philadelphia and London, have just issued a revision of their handsome ilustrated catalogue of medical, surgical, and scientific publications. Beyond question this is the most elaborate and useful catalogue we have ever seen. The descriptions of the books are so full, the specimen illustrations are so representative of the pictorial feature of the books from which they are taken, and the mechanical get-up so entirely in keeping with the high order of the context. The authors listed are all men of recognized eminence in every branch and specialty of medical science. The catalogue is well worth having, and we understand a copy will be sent free upon request.

Self-Propelled Vehicles. A Practical Treatise on all forms of Automobiles. By James E. Homan, A.M. Fifth revised edition, entirely rewritten. New York: Theo. Audel & Co., 63 Fifth Avenue. 1907.

New and completely revised, this popular book fulfils the requirements of the motor vehicle owner, operator and repairer.

In his revision, the author has emphasized the practical aspects of motor vehicles of all powers, confining his space to the discussion of matters fundamental in construction and management.

Recognizing that the gasoline vehicle is the typical automo-

bile, considerable space is devoted to its complete discussion: theory, operation, and an extensive chapter on "Gasoline Engine Management," the latter covering, virtually, all forms of difficulty liable to occur under service conditions. Anyone reading this chapter can derive an intelligent conception of the requirements for an expert driver, and will find numerous points of information, usually obtainable only by long and varied experience.

To sum up the excellencies of this book, it must be acknowledged that it fulfils the ideal of the practical motor driver's *vade mecum*. All subjects are fully illustrated; as to its standard of book-making, it may be said to be almost unequalled in paper, type-work and binding.

The Man who Rose Again. By Joseph Hocking. Toronto: The Copp, Clark Company, Limited. Illustrated.

The story of a young politician in England, filled with wine, in the silly season makes a bet with three others in a London club that he can woo and win any woman in society they may name. They "take him up," and he starts on his errand. He falls desperately in love with the woman, and just on his wedding-day his bride-to-be hears of the bet and refuses him. He goes fiercely into politics, and his old enemy, drink, conquers him. He dies to all former life and friends, but after many years returns, every inch a man; and of course the rest of the bright story is easy to guess, and makes pleasant reading.

Modern Clinical Medicine. Diseases of the Digestive System. Edited by Frank Billings, M.D., Professor of Medicine, University of Chicago, and Professor of Medicine and Dean of Faculty, Rush Medical College. An authorized translation from *Die Deutsche Klinik,* under the general editorial supervision of Julius L. Salinger, M.D. With forty-five illustrations in the text. New York and London: D. Appleton & Company. 1906.

This volume is also very highly to be commended, dealing, as it does, with the methods of examination, diagnosis and treatment of the chief disturbances of the digestive organs. Ewald writes on Gastric Ulcer and Gastric Hemorrhage, Boas on Gastric and Intestinal Carcinomata, Minkowski on Jaundice and Hepatic Insufficiency, and Neusser on Gall-stones. This is only a few of the many excellent articles; one in particular, however, should have special attention directed to it, that is, the methods of examination of the feces, by Strasburger. That is a subject which has been greatly neglected by the profession generally, doubtless

on account of its unpleasant character. Such examinations, if systematically made, will often give a clue to diagnosis of an obscure case, especially when there is occult blood or pus in the feces. The translation should be much better than it is. The close following of the German phraseology often obscures the meaning so greatly as to render it doubtful even after close thought. If a further edition appears, it is to be hoped that the ideas and not the words of the author will be given. However, the work will amply repay the time required to master its contents.

A. M'P.

Prevalent Diseases of the Eye. By Samuel Theobald, M.D., Clinical Professor of Ophthalmology and Otology, Johns Hopkins University. Octavo of 551 pages, with 219 text-illustrations, and 10 colored plates. 1906. Cloth, $4.50 net. Half Morocco, $5.50 net. Philadelphia: W. B. Saunders Company. Canadian Agents: J. A. Carveth & Co., Toronto.

Dr. Theobald's work is meant for the general practitioner, not for the specialist, and hence no detailed account is given of refraction, nor of ophthalmoscopic appearances. The chapters on examination of the eyes, and on the general treatment of its diseases, are very interesting. In that on the lachrymal passages he advocates the use of much larger probes than the Bouman probe so generally used. The general practitioner finds his greatest bugbear in glaucoma, which is so frequently mistaken for iritis, and even for sick headache, so that one reads with pleasure the sound, practical advice on the subject. Injuries of the eyes by foreign bodies, contusion, or incision, are fully dealt with. The chapter on the use of glasses in hypermetropia, myopia and astigmatism will be appreciated by every practitioner. We predict for this work a flattering reception. J. M. M.

The Practice of Gynecology, in Original Contributions by American Authors. Edited by J. Wesley Bovee, Professor of Gynecology, George Washington University, Washington, D.C. Philadelphia and New York: Lea Brothers & Co. 1906.

This is an eminently practical and at the same time scientific work written by seven men, each one of whom is an expert in the subjects assigned him. The Editor, Dr. J. Wesley Bovee, has apportioned the topics covered to men in the prime of life and in the full tide of professional activity, and each one seems to have put his heart into his work. Dr. Bovee's own part, both as writer and as editor, has been just what, knowing his brilliant surgical career and the value of his previous writings, we would have been led to expect. The personal equations make uniformity impos-

sible in the various sections of the book, but it may be safely claimed that no man in general practice can read even the least satisfactory section without having his knowledge of its subject made much more exact and more useful. Pathology and bacteriology are given much more than the usual prominence. The diseases of the rectum and of the urinary apparatus are fully considered, and very properly so, since they enter into the every-day work of the gynecologist to no inconsiderable extent. The authors, the editor and the publisher are alike to be congratulated on the production of this work, and to the profession it can be commended without the least reservation. N. A. P.

Manual of Otology. By Gorham Bacon, A.B., M.D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York; Aural Surgeon, New York Eye and Ear Infirmary; with an introductory chapter by Clarence John Blake, M.D., Professor of Otology in Harvard University. Fourth edition, revised and enlarged. With 134 illustrations and 11 plates. New York and Philadelphia: Lea Brothers & Co. 1906.

The number of books appearing dealing with otology has of late years been large. Most are written for the student, general practitioner and specialist, with a result that from the students' standpoint they do not answer. Bacon has written particularly to students, and judging from the call for new editions, he seems to have filled a real want. The book must not be considered as elementary alone—it is this—but far more. The introductory chapter is written by Dr. C. Blake. We welcome his remarks regarding the evil results following the establishment of short courses in otology. They are the means frequently of making students and general practitioners think themselves proficient for all otological work, and that it can be learned in a few weeks' course. He utters a word of warning regarding overtreatment in cases of non-suppurative middle ear disease. The anatomy is clearly and concisely written and well illustrated. The methods of examination are well set forth, and that part dealing with tuning fork reaction is very clear and simple, a point other writers do not always reach. In speaking of the treatment of injuries of the membrani tympani, Bacon insists that instillation and syringing should be avoided. One should not interfere too much in such cases, but we think disinfection of the external auditory canal will tend to prevent intra-tympanic infection from without. In acute catarrhal otitis media he advises in cases where adenoids are present in young children, they may be scraped by the finger nail during the preliminary examination. If there are sufficient growths in the naso-pharynx to require removal, we think it better

that this be done systematically and thoroughly. In the post-operative treatment of adenoids he advises a post-nasal spray for the first twenty-four hours. We think this not only unnecessary, but harmful. Bacon thinks there is too much surgical and too little medical treatment in hypertrophic tonsils. Chronic hypertrophic and atrophic rhinitis occupies only three pages. In connection with the treatment of nasal polypi no mention is made of the frequency with which they are associated with sinus disease. He advises the application of the cautery to the base of removed polypi. This is of very questionable utility, and may be followed by very severe reaction. The chapters dealing with the operative surgery of the mastoid are well written and splendidly illustrated. An appendix is added on the various methods of preparing smears. This is an innovation and a useful chapter. From the student's standpoint we think a chapter dealing particularly with formulæ and their special indications would be of value. The book is one we have read with great pleasure, and is one bound to continue its popularity if for no other reason than its simplicity and full citation of modern otological procedures. P. G. G.

The *Thrice-a-Week World,* now that a great Presidential campaign is foreshadowed, hopes to be a better paper than it has ever been before, and it has made its arrangements accordingly. Its news service covers the entire globe, and it reports everything fully, promptly and accurately. It is the only newspaper, not a daily, which is as good as a daily, and which will keep you as completely informed of what is happening throughout the world. The *Thrice-a-Week World* is fair in its political reports. You can get the truth from its columns, no matter what are your politics, and that is what you want. A special feature of the *Thrice-a-Week World* has always been its serial fiction. It publishes novels by the best authors in the world, novels which in book form sell for $1.50 apiece, and its high standard in this respect will be maintained in the future as in the past.

Handbook of the Diseases of the Eye, and Their Treatment. By Henry R. Swanzy, A.M., M.D., President of the Royal College of Surgeons in Ireland, and Louis Werner, M.B., Ophthalmic Surgeon to the Mater Hospital. Ninth edition, with illustrations; 815 pages. London: H. K. Lewis. 1907. Price, 12s. 6d.

A new edition of the old favorite Swanzy is welcomed. In this edition Dr. Werner, so favorably known to all transatlantic visitors to Dublin, appears as collaborator. The book grows in pages with each succeeding edition, yet nowhere will one find so

readable and yet so succinct an account of the diseases of the eye. To have had one edition of Swanzy is to want the next one.

J. M. M.

The following comprise some of the more recent books published by the J. B. Lippincott Co., of Philadelphia, all of which are procurable from the Canadian agent, Chas. Roberts, Montreal. "Electro-Therapeutics," by Mihran Krikor Kassabian, M.D., with chapters on radium and phototherapy., cloth, $3.50, half leather, $4.00; "The Diagnostic Relations Between the Eye and Nervous System," by William Campbell Posey, M.D., and William G. Spiller, M.D.; "Clinical Diagnosis," by Charles Phillips Emerson, M.D., a text-book of clinical microscopy and clinical chemistry for medical students, laboratory workers, and practitioners of medicine; "Study of Blood-Vessels," by Arthur V. Meigs, M.D.; "Diet and Dietetics," by A. Gauthier; "A Nurse's Hand-Book of Medicine," by J. Norman Henry, M.D., "United States Dispensatory," edited by Horatio C. Wood, M.D., Professors Joseph P. Remington and Samuel P. Sadtler; "Therapeutics: It's Principles and Practice," by Horatio C. Wood, M.D., and Horatio C. Wood, Jr., M.D.; "Post-Mortem Pathology," by Henry W. Cattell, M.D.; "Pediatrics," by Thomas M. Rotch, M.D.; "Genito-Urinary and Venereal Diseases," by J. William White, M.D., and Edward Martin, M.D.; "Aseptic Surgical Technique," by Hunter Robb, M.D., "Medical Pocket Formulary," collated by James C. Wilson, M.D.

A Primer on Psychology and Mental Disease. For use in Training-Schools for Attendants and Nurses, and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M.D., Medical Director of Oak Grove Hospital (Flint, Mich.) for Mental and Nervous Diseases, formerly Medical Superintendent of the Eastern Michigan, Asylum, etc., etc. Third edition. Thoroughly revised, with illustrations. Pages viii.-183. 12mo. Bound in extra vellum cloth, $1.25 net. Philadelphia: F. A. Davis Company, publishers, 1914-1916 Cherry Street.

This excellent little work is fully up to the standard of its predecessors. In this edition the section on Psychology has been thoroughly revised, and that on Forms of Disease re-written in accordance with the newer classification of the Insanities. The illustrations are a decided aid to a clear comprehension of the text, which has been tersely written. This book, owing to the clear and concise manner in which the subject is discussed, is certain to be of great assistance to all who are interested in this branch of medicine. We have much pleasure in recommending it.

D. C. M.

The Medical Record. Visiting List or Physician's Diary for 1907. New Revised Edition. New York: Wm. Wood & Company, Medical Publishers.

The appearance of the 1907 edition of this handy little, but elegant, pocketbook will be welcomed by the many practitioners who use it. The matter calculated to be useful in emergencies is increased in amount, while that which is better found in a library is omitted. Physicians are enabled by this booklet to keep together the many notes, addresses, dates, etc., which are usually lost when most wanted. P. G. G.

The Doctor. By Ralph Connor. Toronto: The Westminster Publishing Company.

Ralph Connor wide awake, the great West as it is, people as they are, the outlook and the power of Infinite Good as it transforms life, and, of course, the golden chain of sorrow and love's dream, and the great, dark shadow of the Reaper,—writ large. The author tells his story faithfully, as if fascinated by it himself; he is a photographer rather than an artist, and he often leaves his negative without retouching. In life's garden he pulls the flowers to pieces, counts their parts, and classifies them; he rarely picks a rose and just inhales its perfume, he somehow lets the thorn prick him. The book needs no praise; it has already won its place. W. A. Y.

High Frequency Currents: Their Production, Physical Properties, Physiological Effects, and Therapeutic Uses. By H. Evelyn Crook, M.D., B.S. (Lond.), F.R.C.S. (Eng.); Of the Middle Temple, Barrister-at-Law; Assistant in the Ophthalmic Department, West London Hospital; Member of the Rontgen Society, etc.; formerly Assistant in the Electrotherapeutical Department, West London Hospital, etc. Pp. x.-206. Illustrations, 44. Price, $2.25. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. Canadian Agents: J. A. Carveth & Co., 434 Yonge Street, Toronto. 1906.

This admirable contribution to the literature of a subject that is attracting an ever-increasing amount of attention, is divided into three parts. In Part I. the author deals with the production and physical properties of high-frequency currents. A short, but sufficient, chapter is devoted to their history, the sources of energy are treated in greater detail, and much attention is given to consideration of the various forms of apparatus employed. The physical properties are then enumerated, and the applications of the currents, with descriptions of high-frequency armamentaria. In Part II. the physiological effects are set forth as regards the nervous

system, circulation, respiration, elimination, heat production, and upon micro-organisms. In Part III. the therapeutical uses of high-frequency currents are considered; their value in some surgical conditions, such as sprains, synovitis, joint inflammations when not purulent, malignant nor gonorrheal, in dislocations after reduction, and in delayed osseus union are noted. A chapter is devoted to tuberculosis, including phthisis, tuberculous glands, scrofulous ulcers of the legs, tubercular bursitis and ganglion. Next, some general diseases are enumerated—acute, sub-acute and chronic rheumatism, rheumatoid arthritis, lumbago, sciatica, gout, diabetes, obesity, anemia and chlorosis. Some diseases of the nervous system next receive attention—headache, insomnia, neuritis, neuralgia, chorea, torticollis, hysteria, neurasthenia. Under diseases of the respiratory system we find the treatment beneficial in chronic laryngeal and pharyngeal catarrh, also in attacks of acute catarrh of the nose and air passages, in asthma, chronic bronchitis, bronchiectasis. Among diseases of the alimentary system amenable to treatment are chronic dyspepsia, dilatation of the stomach, chronic constipation, intestinal colic, colitis, appendix sinus, hemorrhoids, anal fissure, pruritus ani. Classed under diseases of special organs we find trachoma, opacity of cornea, chronic catarrh of the middle ear, tinnitus, dysmenorrhea, gleet, vaginitis. The work concludes with reference to some diseases of the skin where these currents will be found valuable: thus, prurigo, varicose ulcers, chronic eczema, psoriasis, chilblains, congestion of the face after X-raying, and nevus. Numerous illustrative cases occurring, both in the practice of the author and of others, are cited to bear out the various contentions as to the utility of this form of treatment in the respective conditions.

C. R. D.

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association and British Medical Association; Fellow of the Medical Society of London, etc. Sixth edition, thoroughly revised. (In conformity with latest revised U. S. Pharmacopeia, 1905.) Royal octavo, 1244 pages. Extra Cloth. Price, $5 net. Full Sheep. Price, $6 net. Philadelphia: F. A. Davis Company, 1914-16 Cherry Street.

This the sixth edition follows the recent issue of the U. S. P., and has necessitated extra work by the author to keep this edition up to date and represent the present state of therapeutics. Among

the notable changes from the last edition are: Part I. is entirely added, having been taken from the Student's Edition, thoroughly revised and completed by adding a comparative table, giving the changes in the strength of preparations and relative dosage, in the present pharmacopeia and the one which preceded it. Among the new therapeutic agents will be observed a consideration of the Rontgen Rays and the Finsen Light, or Actinotherapy, Serumtherapy, Animal extracts, Vibrotherapy, Hydrotherapy, etc. A good work for the student and practitioner. A. J. H.

Lectures on Massage and Electricity in the Treatment of Disease. By Thomas Stretch Dowse, M.D. Abd., F.R.C.P. Edin.; formerly Physician Superintendent Central London Sick Asylum; President North London Medical Society; Member of Council and Secretary for Foreign Correspondence Medical Society of London; Physician to the North London Hospital for Consumption and Diseases of the Chest, to the North-West London Hospital, and to the West-End Hospital for Epilepsy and Diseases of the Nervous System; Associate Member of the Neurological Society of New York, etc. Sixth Edition Revised. Pp. xii.-447. Illustrations, 88. Price, 7s. 6d. net. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1906.

That these lectures have attained a sixth edition amply attests their popularity, a popularity which is as evident as it is deserved; but if one wishes to satisfy himself as to the reason why, let him read this very interesting, as well as instructive, volume. He will be well repaid, and will have no cause to regret the time spent in perusal. If unfamiliar with the subject, he will be rather surprised at the extent to which massage may be used with undoubted benefit, and the great variety of diseases in which it is indicated. The section on medical electricity is necessarily somewhat condensed, as massage is the author's forte. A few quotations from the preface and introductory remarks will bear repeating: "Every person engaged in the application of massage and electricity to the human body should not only be certified, but registered by the state." "The due recognition and the compulsory teaching of electricity as part of the medical curriculum, will not only place its practitioners in a satisfactory and wholesome position, but will go far to destroy the army of unqualified pretenders." "Let it be hoped that ere long electricity will be relieved from the trammels of the illegitimate crowd. It forms one of the most fascinating subjects with which the trained mind can be associated, and the study of its action, both from the physical and psychical aspects, is worthy of the most skilful of physicians and surgeons."

 C. R. D.

Jane Cable. By George Barr McCutcheon. Toronto: William Briggs. Cloth, illustrated.

A story full of interest as a story can be with the flash and glitter of wealthy Chicago for a background, hearts as trumps, and the stakes ace high. The background changes as the story unfolds, and with the author's well-known love for "a bit of a scrap," hero and heroine drift off to the Philippines. Stirring scenes occur. The interest of the reader never flags until the united family return to Chicago and the Man in the Moon looks down and laughs at the usual happy ending.

The Uses of X-rays in General Practice. By R. Higham Cooper, L.S.A., Medical Officer in Charge of the Radiographic Department at University College Hospital; Physician to the Electrical Department at Tottenham Hospital; Radiographer to the Evelina Hospital for Sick Children. Pp. vi.-98. Illustrations, 15. Price, 75c. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. Canadian Agents, J. A. Carveth & Co., 434 Yonge Street, Toronto. 1906.

This little book is written for the general practitioner. The first part shows him where X-rays can be of service to him in diagnosis, and the second part explains the use of X-rays in the treatment of disease. A wonderful amount of valuable information is condensed into small volume, and for those who wish to know the diagnostic and therapeutic value and the present scientific standing of the X-rays, a careful perusal of this book will be found most helpful. The busy practitioner who has no time to devote to the use of X-rays and very little time to spare for reading will be especially grateful in that he does not require to wade through interminable physics, technique and cases in order to find out just what he wishes to know about the X-rays. C. R. D.

The All-around Specialist, a treatise giving the technique of the specialists in the most important branches of medicine. By J. R. McOscar, M.D. Illustrated. Third edition, revised and enlarged. Philadelphia: J. B. Lippincott Company. 1905.

Dr. J. R. McOscar, who died in October, 1905, revised and enlarged the third edition of this book shortly before his death, and had in contemplation further developments for the future of the "all-around specialist." The present edition is, however, a fitting monument in commemoration of the life and work of the author and shows a broad knowledge of human nature and liberality of views together with considerable medical research and practical experience on the part of the author. Where this book is read both the patient and the doctor will alike benefit. The aim

of the author has been to give the technique employed by the specialists in various important branches of medicine in such a manner that it may be easily applied in the practice of those who may be unfamiliar with the details of specialism. E. H. A.

First Aid to the Injured and Sick: An Advanced Ambulance Handbook. By F. J. Warwick, B.A., M.B. (Cantab.), M.R.C.S., L.S.A., and A. C. Tunstall, M.D., F.R.C.S. (Ed.). Fourth edition. Twentieth thousand. Pp. xiii.-242. Illustrated. Cloth, 2s. Paper, 1s. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1906.

This excellent and popular little treatise on first aid has been thoroughly revised and some illustrations have been added. It is a capital handbook, especially for advanced pupils and lecturers. The language employed is clear, and the illustrations, of which there are no less than 220, elucidate the text admirably.

C. R. D.

A New Work on Foods and Their Adulterations.—Timeliness of interest, aside from any other condition, lends especial importance to the announcement of the early publication of "Foods and Their Adulterations," by Harvey W. Wiley, M.D., to be immediately followed by a companion volume, "Beverages and Their Adulterations." Dr. Wiley is Chief Chemist to the United States Department of Agriculture, at Washington, and his wide researches in the interests of purity in food commodities give anything he might write on the subject an authoritativeness that is unquestioned. The fact that the new National Food and Drugs Law became effective on January 1st, and that public interest in it is now at white heat, will no doubt result in quite a demand for both volumes. The books will be generously illustrated from original photographs and drawings.

A Syllabus of Materia Medica. Compiled by Warren Coleman, M.D., Professor of Clinical Medicine, and Instructor in Materia Medica and Therapeutics in Cornell University Medical College; Assistant Visiting Physician to Bellevue Hospital. Third edition. Revised to conform to the Eighth Decennial Revision of the U. S. Pharmacopeia. New York: William Wood & Company. 1906.

A good class-room book in a pocket edition, and exceedingly convenient for the busy student to assist him to condense the facts and tabulate the drugs, and supplement the usual text-books. The only important change which has been made in the text is the addition of two new sections upon Minor Toxic Actions and Toxi-

cology. The whole volume, however, has been carefully revised, and the errors which crept into the first edition have been corrected.

Medical Electricity: A Practical Handbook for Students and Practitioners. By H. Lewis Jones, M.A., M.D., Fellow of the Royal College of Physicians, London; Medical Officer in Charge of the Electrical Department in St. Bartholomew's Hospital; late President of the British Electrotherapeutic Society; Honorary Fellow of the American Electrotherapeutic Association; Member of the Societe Francaise d'Electrotherapie et de Radiologie; Editor of *Medical Electrology and Radiology.* Fifth edition. 8vo. Pp. xv.-519. Illustrations, 185. Plates, 11. Cloth, 12s. 6d net. London: H. K. Lewis, 136 Gower Street, W.C. 1906.

In this edition the subject-matter has been rearranged with much advantage. Many new sections have been added, thus making this well-known work more valuable than ever. The author, who is an accepted authority on electrotherapy, fully sustains his reputation as a most conservative writer, and deserves the unstinted thanks of the medical profession for his skilful and lucid presentation of an all too little understood, but most important, subject. C. R. D.

The reason why "Webster's International Dictionary" is the standard for the English-speaking world is because it is used as the standard by the Supreme Court of the United States and by nearly all of the Federal and State Courts, where justice often hangs on the meaning of a word; because it is the standard in the United States Government Printing Office at Washington, and in the executive departments generally; because the Schoolbooks of the country are based upon it,—25,000,000 or more annually,—so that the children are educated in accordance with its principles; because in every instance where State purchases have been made for the supply of public schools, Webster has been selected; because it is heartily recommended by Presidents of Universities, Colleges and Seminaries, and by Superintendents of Schools almost without number; and because it is warmly endorsed and commended by men and women of recognized authority in matters of literature and science all over the world.

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Original Contributions.

A CANADIAN ACADEMY OF MEDICINE WITH ITS BRANCHES vs. LOCAL ONES AT TORONTO AND ELSEWHERE.

BY JOHN HUNTER, M.B., TORONTO.

The movement to establish a Toronto Academy of Medicine brings up for discussion the question, *viz.*, whether it would not be more in the interest of Canadian medicine, in its literature and practice, to establish a Canadian Academy of Medicine, with branches throughout the whole Dominion, than local ones in Toronto and elsewhere. It can be frankly admitted that the establishment of a Canadian Academy of Medicine is a very large proposition and beset with many difficulties, but who would dare to say that these are insuperable, or such that unremitting endeavor and concentration of purpose could not meet and overcome? This great project can be discussed from many standpoints; the writer limits himself to two phases of it: 1. Scientific. 2. Patriotic.

Scientific Phase.

Social and economic conditions, up to the present time, have made the earning of a livelihood the dominant factor in the professional life of most medical men. It need scarcely be added that no censure is implied in this statement, for the object is a most legitimate and worthy one. A physician's time and energy are practically exhausted in the exacting routine of daily duties. How many of us at nine or ten p.m. feel like taking up a work on, say, physiology, anatomy or pathology, in order to prosecute a course of study in any one of these or other medical subjects?

Yet we all admit that without such study we cannot hope to keep abreast of medical progress. Is it not in order then to hold out some great inducement, especially to our young men, not only to keep abreast of the times by systematic study, but to forge ahead in research and original work? Membership in a National Academy of Medicine would doubtless prove a great inspiration to work. A Canadian Academy of Medicine would of necessity have its official organ, the chief purpose of which would be to encourage scientific work, and to be the medium through which at least all meritorious Canadian contributions would be accessible to every member. The different branches would be a great source of emulation to each other. For instance, Toronto would be very anxious to have the character of its work compare favorably with that of the other cities throughout the Dominion. Again, this journal going abroad as the official organ of a national institution would on this account have a prestige that would add great weight to its utterances. A physician's name appearing under the title of an article would challenge attention and command respect. With such a journal going into the medical libraries of the world Canadian physicians would have only themselves to blame if Canadian medicine, in its literature and practice, did not receive recognition. Is there not latent energy enough in our ranks to-day, as well as in the new material coming into our medical colleges, to give to Canadian medicine a national status? Can we not aspire to have physicians in the British Isles and in the United States say, "Well, in Canada they teach and do so and so"? The genius of our people has given national traits to our methods in legislation, finance, commerce, industry, transportation, agriculture, education, etc.; is it too much to ask the physicians of Canada to give a national trait to Canadian medicine in its literature and practice? Up to the present time Canadian medicine has occupied much the same status as that of the so-called semi-ready clothing establishments. The more ambitious of our graduates, like Osler and many others, have had to go abroad to receive recognition. A profession, like a bank, cannot stand too great a drain on its resources. Have we not lost about enough of our best men? What could a local organization, such as a Toronto Academy of Medicine, do to induce ambitious young men to give their best work to the building up of a high professional status in their own country? A union of the different medical societies in Toronto might serve the local interests of the physicians in Toronto, but such a union could have no national significance. It could make no appeal to the profession at large, for it would not have an official organ, and there would be no one, or very few, from outside in its membership. As the Toronto branch of a Canadian Academy of Medicine it would still have every advantage that could come of a union of the different

societies as already proposed, but in addition to this would be in the full enjoyment of all the benefits to be derived from union with a great national organization. It is said, "Let us organize the local ones first, and then later on unite these in a national one." Would this lessen the difficulties any? A Toronto Academy of Medicine would as an independent organization have its own president and other officials, its own property, etc.; Montreal, Halifax, Winnipeg, the same. Would it be an easier matter to change all this at the end, say, of twenty years, than it would be to establish a Canadian Academy of Medicine, and allow the branches to fit into the constitution as they grow? The latter would be along lines of natural development—first the trunk and then the branches, to bear luscious fruit. The former would mean radical disorganization of independent institutions into the branches of a national one.

Again, could there be a more opportune time for instituting a great movement in the interests of scientific medicine than the present? For years our medical journals have been calling attention to the great need of an Academy of Medicine. Osler in a recent address gave the proposition an enthusiastic endorsation. The approaching meetings of the Ontario and Canadian Medical Associations will afford ample opportunities for conference with medical men from all over the Dominion.

Pages could be written on this phase of the subject without exhausting it, but suffice it to say that the greatest needs of our profession are something that will inspire every member to do her or his best, and some source through which the good work done in our ranks can become available for the use of all. Let us endorse in action the sentiment expressed by Homer:

> "By mutual confidence, and mutual aid
> Great deeds are done, and great discoveries made.
> The wise new prudence from the wise acquire,
> And one great hero fans another's fire."

Patriotic Phase.

The medical profession as such has nothing to do with that brand of spurious patriotism that satiates itself in flaunting the flag for mercenary, partizan and jingoistic purposes. But the spirit of true patriotism, that inspires the worthy citizen to use every honorable means in his power to make his country a desirable one to live in, should animate the soul of every physician. It is not only legitimate, but it is the duty of every Canadian to make known as widely as he can the natural resources of his country—its illimitable wealth in mine, forest, and fertile soil. Is it any less his duty to make known the status of its educational institutions when these are so well worthy of commendation? What better asset can any country have than the services through-

out its whole domain of intelligent, capable physicians? We have been told recently by a very distinguished statesman of the neighboring republic that Canadians are great nation-builders. This is true, for within the memory of some of us—not yet in the "chloroform stage"—Canadian statesmanship has built out of what were heterogeneous provinces, knowing little about, and caring less for, each other, a giant young nation, challenging the admiration and respect of the great world powers. In all ages the genius of medical men has been a potent factor in nation-building. Who have prevented such scourges as smallpox and cholera from decimating the race? The accomplishments of the physicians of ancient Greece and Rome add lustre to the history of these great empires, and what more interesting chapters in the history of Italy, France, Germany, Great Britain and the United States than those to be found in their medical libraries? In neither the literature, art, legislation, press nor pulpit of any of these has there been a higher type of genius displayed than in the case of many of their physicians. How much poorer these countries would have been without a Galen, Pasteur, Virchow, Lister or Flint, who can estimate?

There is a place for patriotism in medicine, for it can be made a great factor in nation-building. This brings up the question, *viz.*, how are we to make the best use of our calling in developing Canada? Would a number of local institutions be as potent a factor as a national one? Can we not get some guidance from both sacred and secular history? The Saviour himself, when He commanded His followers "to go into all the world and preach the gospel," gave utterance to the germinal principle governing all great movements. Had His apostles—and as a matter of history one of them did until his eyes were opened by a vision—taken the same view of Christianity as some of our Toronto physicians take in regard to medicine, they would have sought to unite the churches in Jerusalem and called the new organization "The Jerusalem Church of Christianity." What dire results would have followed such a course! Take another case from biblical history—Jonah was asked to make a national appeal to Nineveh for a higher life. Like some in our day he put self-interests first. Doubtless he thought himself, and was also told by his friends, that any effort to make religion of national interest was only "the dream of a visionary, and beset with too many difficulties." He learned from a tragic and humiliating experience the fate of selfishness. When he became unselfish and patriotic he went forth on a mission that saved a nation and won immortality for himself. From secular history we learn that the Babylonian, Persian, Grecian, and Roman Empires reached the zenith of their power and glory when they were expanding and utilizing the "brawn and brain" of all their possessions. When their capitals

assumed to be *the* nation, became vainglorious and ignored the interests and rights of the provinces, destruction and humiliation, like sleuth-hounds, fell upon him. Do not the lessons of history teach us that if Canadian medicine, in its literature and practice is to become great, it must have national aspirations? The swaddling bands of even a Toronto parochialism would paralyze its growth.

At the meeting recently held in the Medical Library *re* the instituting of a Toronto Academy of Medicine, the proposal to establish a Canadian one with branches in Toronto and elsewhere raised the following objections, *viz.*: "It would destroy the present movement," "It is too visionary," "There are too many obstacles in the way," "It would be better to start local academies and unite these into a national one later on," "New York, Buffalo, and even Rochester, have their own Academies of Medicine." All of these but the last are matters of personal opinion and have already, in part at least, been referred to in this article. The last is a question of comparison, and as such is only of value in so far as conditions are comparable. Let us briefly compare conditions. These local academies were established when the population of the country probably exceeded seventy millions. The New York Academy of Medicine could easily enlist as large a membership as a Canadian Academy could with the whole Dominion to draw from, so then in size ours would be no more unwieldy than the New York one. The United States has all the component factors of a great nation; we are yet minus the one most important factor in a great nation's outfit—namely, population. We must use every lawful agency in attracting attention to our country, and a Canadian Academy of Medicine would be one of these. Restricting the term American to the United States, we can say that American medicine attained national distinction quite early in the last century. The works of American medical authors are read everywhere throughout the English-speaking world and many are translated into foreign languages. Wealth and population have enabled their great metropolitan medical journals to reach not only all their own physicians, but many of them to find a wide circulation in Canada. There is not a "nook or cranny" in American medicine, in either its literature or practice, that has not been exploited by writers and practitioners. There are uses for New York, Buffalo and Rochester Academies of Medicine, but all the purposes for which an American Academy of Medicine could exist are already accomplished facts. A century ago such an institution could have rendered most efficient service in nation-building had other conditions been as they are now. But then New York was less accessible to Washington than Dawson City is to Toronto now. Then the annual meeting of the executive of a national organization would

have involved many and perilous hardships; now, with transcontinental parlor coaches, such a meeting would be a most welcome one as a very enjoyable holiday trip.

We have glanced at the status of American medicine—and for much the same reasons British, German and French medicine may be placed in the same grade—let us briefly consider that of Canadian medicine. Leaving Osler, Cullen, Barker *et al.* aside, as we only furnished these with a semi-ready outfit, what portion of the field of medicine have Canadian authors exploited? A text-book on "Nose and Throat," and one on "Obstetrics" are about the only ones to be found in any of our libraries, and in probably fifty per cent. of them you would not find even these two. Our journals, though very creditably edited, yet on account of their number and of the paucity of physicians compared to the size of our country, can at best only reach a very limited number of readers. These journals, like our authors, can do but very little towards giving Canadian medicine national recognition, either at home or abroad. We think when one of our confreres goes to New York, London or Vienna and takes a post-graduate course he is professionally quite a superior personage. Would a doctor coming from any of these places to Canada for a post-graduate course be welcomed home in any such fashion? Now it may be as individuals we have no need to be ashamed of our work or our scientific culture as members of the medical profession, but what have we done collectively for Canadian medicine? More physicians go to the little town of Rochester, Minnesota, almost any day in the week, to see American medicine as practiced in its surgical section by the Mayo brothers, than visit Canada for a like purpose in a decade. We have produced raw material—*e.g.*, Osler, the late J. E. Graham, and others, in many respects the peers of the Mayos—but hitherto we have not provided such men with the necessary accessories for giving to Canadian medicine national recognition. Is not the need of a Canadian Academy of Medicine an imperative one?

THE DOMINANCE OF THE NUCLEUS. *

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THERE are, it seems to me, two alternative reasons which should govern the choice of a topic for discussion at the meetings of Sections of this Association: either to afford to the general medical public an expression of opinion by specialists upon topics of the time, or, on the other hand, to direct the attention of the public to matters in which it is well that they should be interested. These discussions are not merely for the benefit of the participants; they are published *in extenso* in what has become the organ of the British practitioner throughout the world; and this public aspect must be kept in sight, nor should the debate be allowed to narrow itself into the discussion of minutiae.

It must be frankly admitted that nuclear function is not exactly a burning question of the day. Your ordinary medical man is little concerned about it; your routine physiologist is concerned in the main with mass effects; your pathologist sees, it is true, certain changes in the nucleus in various conditions of cell disturbance, but what these changes indicate are scarce discussed in his text-books or journals. It is for the second of the above-mentioned reasons that this topic has been chosen for to-day's discussion. Though we have not what has become a topic of the time, we have a matter which it is timely to bring forward.

For years individual observers in zoology and botany, cytologists and students of "Entwickelungs-mechanik," physiological chemists and morbid histologists have been recording facts regarding the nucleus, and these facts brought together point to the one conclusion that the nucleus is the dominating structure in the cell; dependent, it is true, upon the cytoplasm, or cell body, but nevertheless dominant. The time has come to realize that general advance lies in a recognition of these foremost properties of nuclear matter, to recognize the fact that within the unit, the cell, is the more intimate unit, the nuclear matter, so that the physiology and the pathology of the future is destined to be nuclear rather than cellular. Or, to be more exact, while the cell remains our natural unit, within that cell the modifications that have taken place must receive their explanation primarily in terms of nuclear change. Possibly this may seem to be a matter of little moment to the practitioner. So I doubt not appeared fifty years ago Virchow's insistence upon the all-importance of the cell. We can but say here, that to the thoughtful man, ever seeking the why

* Read before meeting of the British Medical Association, Toronto, August, 1906.

and wherefore of things, even if the ultimate answer is never to be reached, each successive step onwards towards that ultimate answer is a notable achievement, and this because each such step affords wider generalizations and the recognition of a fuller harmony of phenomena.

And there are other and weighty reasons, first among which is the opportunity this choice affords as a means of rapprochement between the physiologists and pathologists, and, if the remark be not impertinent, as a means of encouragement to the former. It is good and natural that these two branches of medicine should come together. For many years they have tended to drift apart; the problems which have interested the one have had little compelling interest for the other; and I fear it must be admitted that there has been a feeling on the part of pathologists and of medical men in general that the teaching in the one subject has too often not been in the direct line of preparation for the study of other branches of medical science. In short, physiologists were already embarked in the study of mass effects before the cellular structure of tissues was discovered, and had so large a field before them, that for long years organs and their properties occupied their whole attention. Modern pathology, developing later under the guidance of Virchow, has been essentially based on the cell theory; it is the cell and not the tissue that has formed its unit. Only now are there indications, with the development of finer methods and the relative completion of the work upon mass effects, that physiologists in general are by a natural process gravitating from the study of the tissue, its functions and its chemistry, to that of its component cells. Physiology is becoming and must inevitably become more cellular. And it is peculiarly fitting that here in Toronto we should inaugurate this discussion, in recognition of the pioneer part played by Professor Macallum in emphasizing the importance of cellular physiology. It is no exaggeration to characterize Professor Macallum's long-continued work upon the nucleus, its histology and its chemistry, as the most important series of contributions to medical science that has proceeded, not merely from Toronto, but from Canada at large; no exaggeration to refer to him as the first English-speaking physiologist to consecrate his activities to work along these lines.

It is a sincere pleasure to me, coming from another Canadian city, and occupying in this respect the vantage ground of not being a Torontonian, that I can with propriety direct attention to a matter in which Toronto is among us *facile princeps*. I take it that in opening this discussion I shall perform the greater service if I devote myself to a rapid review of the various findings which together compel the conclusion that the nucleus is the centre of cell activity, leaving it to those who follow me to enter more particularly into the evidence of one or other order.

Such a general survey is more especially demanded because, to my knowledge, it has not yet been attempted; or, more correctly, when attempted, what I regard as the inevitable conclusions have not been drawn. While individual workers have demonstrated the controlling powers of the nucleus in one or other respect, there has been a curious disinclination to bring the various orders of data together and deduce their full significance. But here, as regards this morning's discussion, certain limitations must be introduced. The activities of living matter are to be divided into two categories, intrinsic and extrinsic, or vegetative and functional. The observations which have been made upon the nucleus in connection with vegetative activities, with cell multiplication and reproduction, are very abundant. To discuss these along with the data bearing upon the role of the nucleus in the functional activities of the cell would make this morning's debate altogether too diffuse. It has been thought wiser, therefore, to confine ourselves, save in one respect, to the latter—the functional activities. Nevertheless, if I have correctly interpreted my duties as introducing the subject in order to place in a clear light the controlling influence of the nucleus in the life of the cell, I cannot leave these vegetative activities out of count. As opener, I must as briefly as is possible, consistent with lucidity, bring forward the evidence of nuclear predominance as afforded by studies upon cell and individual reproduction. It was the studies upon mitosis that first revealed the high importance of this constituent of the cell.

We can, perhaps, best treat this section of the subject by means of a series of theses:

1. The properties which distinguish the individuals of any race or family from the individual of any other race or family are to be traced back to the constitution of a single cell, the fertilized ovum, from which that individual has been developed.

2. There must, therefore, be something in the constitution of the germ matter of the parent stock which differentiates it from the germ matter of other stocks. Nay, more, no two individuals appear to possess germ matter of absolutely identical constitution.

3. In individuals of gamogenetic origin, resulting from sexual union, the material contributed to the ovum by the paternal spermatozoon and the maternal ovum is, physiologically speaking, of equal value. As demonstrated by Mendel in his observations upon hybrids, like orders of offspring result whether the male cell of stock A be employed to fertilize the ova of stock B, or the female cells of stock A be fertilized by the male cells of stock B.*

It is evident, therefore, that matter of like order is contributed to the fertilized ovum by the two parents.

4. In studying more narrowly the process of fertilization we

*In mammals intrauterine existence would seem to introduce a factor of differentiation. From their mother's womb male and female show constant differences.

find that the only matter contributed correspondingly by both parents is nuclear matter. Ovum and spermatozoon are cells of widely different appearance, and the result of fertilization is that the female cell affords the cytoplasm, or cell substance of the fertilized ovum; the male cell provides the centrosome. The nucleus of the fertilized ovum or new individual is formed of corresponding amounts of nuclear matter (chromatin) from both parents.

5. Not only is this the case, but, most significantly—I shall take up a probable exception immediately—each supplies a like number of chromatin loops or chromosomes, and, as the fertilized ovum undergoes development and proceeds to divide and redivide, the like process of distribution is continued, so that each separate body cell of the fully-developed organism contains equivalent parts of chromatin of paternal and maternal origin.

6. We can proceed yet further and recognize that in certain species, at least, the chromosomes supplied by or derived from either parent while pairing with like chromosomes from the other parent, are not all identical in appearance and size, but vary among themselves, the variation being constant; that is to say, the same types of chromosomes are found in successive generations of cells. This peculiar variation, as has been pointed out more particularly by American observers (Montgomery and Sutton), is frequent in insects in the cells which ultimately give rise to the germ cells. As Moore and Arnold, of Liverpool, have just shown, a like constancy is to be made out in the types of chromosomes seen in the spermatocytes of mammals, even of man himself. The constancy of the particular varieties present in individual species suggests that the chromosomes of different orders possess different properties and determine different characters, or sets of characters, in the cells to which they are distributed, and in the individual formed from the aggregation of these cells. In support of this hypothesis are the remarkable observations, first, of McKlung, of Kansas, and, later, of E. B. Wilson, of New York, that the spermatozoa of sundry insects are of two orders, though there is but one type of egg. The one order of spermatozoon gives rise to males, the other to females, the difference between the two being in their chromosomes. In the maturing spermatocytes which gives origin to the spermatozoa, either the one set of cells possess an accessory chromosome, or, in other cases, a particular chromosome in one-half the maturing spermatozoa is large, in the other half is minute. To quote McKlung:

"A careful consideration will suggest that nothing but sexual characters thus divides the members of one species into two well-defined groups, and we are logically forced to the conclusion that the peculiar chromosome has some bearing on the arrangement."

Here we are not discussing sex, and I do but note these observations in passing. There are other cases, not as yet fully worked

out, in which, as in the Aphides, there would appear to be one type of spermatozoon and two types of ova.

The natural conclusion to be reached from all these data is that the nuclear matter conveys and determines, or controls, the inherited peculiarities of the individual; further, the conveyance is through matter contained in the chromatin loops or chromosomes, while it may be that these individual loops, varying among themselves, determine particular condition.

What we know concerning the spermatozoon points very definitely to the conclusion that the groups of chromosomes distributed to the spermatozoa derived from a single spermatocyte are not identical, each spermatozoon receiving only one-half the number of chromosomes proper to the primordial germ cell, and to the cells in general of any particular species. The ovum on its part exhibits a like reduction. To inquire further into this remarkable reduction process would lead us into the discussion of variation and the Mendelian doctrine. I do but mention these matters here to call attention to the fact that not merely inheritance but variation is seen to be most intimately associated with the nuclear material and that, if we can trust our eyes, the one morphological constituent involved in and responsible for all cases of inherited peculiarities and gamogenetic variation is included in the nuclear chromatin. That the other constituents of the cell have an influence or can have an influence we do not deny. If in the fertilized ovum the nucleus influences the cytoplasm, so, conversely, the constitution of the cytoplasm must tell upon the nucleoplasm. The facts in our possession indicate that the latter is the subordinate process; the influence of the nucleus is dominant. This is best indicated by Boveri's remarkable observation that if the nucleus be removed from the sea-urchin's egg and the enucleated mass of cytoplasm be fertilized by the spermatozoon of another species of echinoderm the resultant larva is of the type of the species that afforded the spermatozoon, that is, the nuclear material; this has conveyed and determined the specific properties of the individual.

Now, if this be so, it must follow that the nuclear matter controls all the essential cell activities, and this because, studied narrowly, it is seen that the morphological properties of a cell are the expression of the constitution of the cell; it is the constitution that determines the properties and functions of that cell. All are bound together every whit as much as are the properties of any given salt and the constitution of the same. What is true of the cell holds also of the multicellular individual; the specific properties of the individual are the summation of the properties of its component cells. If, therefore, nuclear composition dominates the morphology of the individual cell it dominates likewise the properties of the individual.

It must now be asked, What evidence do we possess estab-

lishing that this is really the case? That evidence may be dealt with under many heads. We have to deal with the evidence afforded by: (1) The natural and experimental enucleation of cells; (2) gross changes observed in the nucleus as the result of cell activities; (3) the finer changes in the same which may be seen to follow functional activity; (4) the histological changes in the nucleus associated with morbid conditions; (5) the chemistry of nuclear and cytoplasmic matter respectively; and (6) the ferment actions of the cell and their relationship to nuclear activity.

I believe that we have the good fortune to see here to-day those who have conducted investigations along each of these lines. Let me now lay before you the main data that have been gained under each of these headings, and the conclusions that may reasonably be deduced.

1. The Effects of Removal of the Nucleus.

The cell which, like the erythrocyte, undergoes natural loss of its nucleus may continue to exist for a considerable period, and during that time actively perform function. The mammalian red corpuscle, for example, according to W. Hunter, Quincke, and others, exists from fifteen to thirty days. While it exists we see no evidence of growth, and certainly it never propagates itself. The same holds good for cells artificially deprived of their nuclei; they do not necessarily undergo immediate disorganization; they can be the seat of certain metabolic activities. According to Klebs, the enucleated cells of the alga, Spirogyra, can in the sunlight produce new starch granules; can, that is, synthesize starch from the carbon, oxygen, and water absorbed, the starch thus formed in the sunlight being used up in the dark; and this may continue for as long as six weeks. They may further continue to exhibit motion in response to external stimuli (Lacrymaria olor, Verworn); they may actively ingest food particles. But, on the other hand, the testimony is unanimous that higher metabolic activities are incomplete. Unlike nucleated portions of a vegetable cell, the enucleated is unable to develop a cell wall of cellulose. Among protozoa, also, Verworn has noted that enucleated pieces of foraminifera show not the slightest capacity to form the internal calcareous skeleton. If the enucleated cytoplasm of *Thalassicola pelagica* ingest foreign particles, it is unable to digest them wholly, and while the enucleated cytoplasm can develop a new centrosome (E. B. Wilson) it cannot give rise to new nuclear material. It may be laid down that if it can form new paraplasmic substances, like starch, it cannot form new cytoplasm and cell substance proper—that is to say, it cannot increase in bulk and undergo cell division and multiplication, or, otherwise, these observations conclusively prove that the nucleus is essential,

not merely for the vegetative activities, but also for the higher metabolic activities of the cell and their due co-ordination.

That the nucleus alone, deprived of surrounding cell substance, cannot regenerate the cell is another matter. It has freely to be admitted, with Verworn, Boveri, and Lillie, that there must be a certain minimal quantity of cytoplasm associated with the nucleus before regeneration can take place. But what this proves is not that the nucleus is not the dominating portion of the cell complex, but only that the association of nucleus and cytoplasm is essential for full cell activity. By the lack of perception of this distinction it may be noted that Verworn's treatment of the whole subject of cell processes is greatly weakened if not vitiated. His facts prove that nucleus and cytoplasm are equally essential for the full function of the cell, not that they are of equal value. We may as well argue that in the community of bees the individual drone or worker is of importance equal to the queen, because we find that the queen-bee, if separated from the rest of the community, is incapable of obtaining food for herself and so starves to death. I shall refer later to what I regard as the right conception of the relationship between cytoplasm and nucleus.

2. Gross Changes in the Nucleus during Activity.

Among these may be noted, (1) alteration in the position of the nucleus in cases in which there are indications of localized as distinct from diffuse cell activities, and (2) alteration in size and shape of the nucleus accompanying active function.

In the animal organism possessing cells with a body which is small in proportion to the size of the nucleus, examples of the first order would appear to be rare, though they are not entirely wanting. Thus Korschelt has shown that in the egg rays of the water scorpion (Nepa) with their cells having remarkable branching nuclei, long branches from two adjoining cells send out processes which come into close proximity. In the space between these a chitinous deposit gradually shows itself, and when the mass of chitin is fully formed the processes are withdrawn. In the plant, movement of the nucleus towards the area of new formation in the cell is relatively common; thus when there is the active formation of a thick cell membrane along one aspect of the cell it has been noted that the nucleus becomes eccentric and approximated to the region of new development. There is a similar eccentric localization of the nucleus during the development of root hairs (Haberlandt). I need but mention instances of the second, namely, of alteration in size—they are now so well known. The earliest observations were those of Heidenhain years ago upon the different appearance of the nuclei of salivary glands when at rest and after stimulation. In more recent years we

have had the striking observations of Hodge, confirmed by Gustav Mann, Lugaro, and others, upon the nuclear alterations in the motor ganglion cells of bees, birds, cats, and other vertebrates, brought about by natural and experimentally-produced fatigue.

These observations also clearly demonstrate that the nucleus is not merely the vegetative centre of the cell, but is involved in its functional activities.

3. Finer Changes Occurring in the Nucleus During the Course of Cell Activities.

If I am not mistaken, it was a native of what we regard as the youngest of the civilized great countries of the world—Professor Ogata—who first, in 1883, clearly recognized the finer nuclear changes associated with secretory activity. He called attention to the granules, or *plasmosomes,* appearing in the nucleus at the beginning of secretory activity—granules which take on the characters of nucleoli and pass from the nucleus into the cell body. In these he held that the zymogen granules are developed, which eventually become (part of) the protoplasm of the cell. In 1887 Lukjanow made confirmatory observations. He noticed in the secreting cell outside the nucleus an agglomeration of little spherules which in form, size, and reaction to dyes were closely related to certain nuclear bodies (*Kernkorperchen*). He drew the cautious conclusion that "it appears in any case that the hypothesis of a connection between the nucleus and the cell body has in itself nothing improbable—a connection shown outwardly by certain structural elements of the nucleus passing over into the cell body and there undergoing further change." In the following year F. Hermann noted the apparent discharge of similar minute globules in mucous goblet cells during secretion, and also called attention to the fact that these in staining powers resemble the nucleolus. These he found were absent from the resting cell. In 1890 Professor Macallum made his first report upon similar phenomena. He pointed out that in the nuclei of developing ova of Necturus (the Lake Lizard, found here in Lake Ontario), as also in that of the frog, at one stage the chromatin is principally collected in the form of nucleoli at the periphery immediately beneath the nuclear membrane. These nucleoli are usually spherical and vary somewhat in size. At this stage yoke granules are absent from the cell. With an indigo carmine dye he found that the nucleus and cell body stained red, whereas the nuclear bodies took on a deep blue. At what appeared to be clearly a later stage yolk spherules made their appearance, and when this happened the whole ovum stained blue, the nuclei being diminished in size. What appeared to be an intermediate stage was seen in ova in which the nucleoli and the cell substance in their imme-

diate neighborhood exhibited a blue stain, while the rest of the nucleus and the main mass of the cytoplasm still stained red. It was difficult from these observations to arrive at any other conclusion than that the nuclear matter becomes differentiated into nucleolar, and that this diffuses gradually through the nucleus and then into the cell substance, the diffusion coinciding in point of time with the formation of the yolk granules. Macallum thus regarded the yolk granules as formed by the union of a derivative of the nuclear chromatin with a constituent of the cell protoplasm. And we here note that these yolk granules chemically are composed in the main of lipoid material, of lecithin, a compound to which I shall refer later. In the pancreatic cells Macallum found—and Steinhaus has made similar observations—that the nuclei possess safranophilous nucleoli, while the rest of the nucleus with double staining takes on a deeper red color of haematoxylin. As the nucleus loses its safranophilous substance, the cell protoplasm acquires safranophilous granules. He concluded that the chromatin of the nucleus gives rise to a substance prozymogen; sometimes it is dissolved in the nuclear substance, sometimes collected in masses (plasmosomes); finally it diffuses out into the cell protoplasm, there meeting with a constituent of the latter to form the zymogen proper.

I might proceed to detail a long series of confirmatory observations by Carlier, by Bensley—made here in Toronto—by Maximow, Solger, Nicholas, E. Muller, Krause, Galeotti, Vigier, Garnier, Greenough, and others, all agreeing—save in minor details—and all bearing upon the processes seen in gland cells. All describe the smallest and first seen granules as situated in the immediate neighborhood of the nucleus; describe these as identical in character with the plasmosomes or nucleoli seen within the nuclear membrane, and have observed that as they pass to a further distance from the nucleus they enlarge into definite secretory granules. It is with the exact stages of this process that there has been and still is some debate; whether they project as buds from the nuclear membrane or make their way out from pores opening into the same; whether they finally dissolve within the cell or undergo solution when discharged into the external medium. But Professors Macallum, Carlier, and Bensley are all here, and I must not further steal their fire. I would only add that what has been determined in the animal cell holds for the plant cell also. Thus, Torrey has described a succession of changes in connection with the nucleus and cell body in the germinating maize seed associated with the production of diastase. The processes are of an identical nature: deep staining granules are first seen in the nuclei whence these exude in small streams into the cytoplasm; scattered at first through the cell, these later become collected at that end next to the endosperm, where they

become ultimately dissolved. It is following upon their dissociation that the first action of a ferment upon the cell wall and matrix of the endosperm becomes evident.

Nor is it only in connection with secretions possessing ferment action that we have evidence of nuclear function. In plants Schniewind Thies has observed nuclear changes in the nectar cells of flowers in connection with the elaboration of nectar. In animals, the curious vacuoles in the nuclei of fat cells which have been known for several years have more recently been shown by Shattock to contain and to give the reaction for fat.

These data almost justify us in accepting Claude Bernard's remarkable prevision of more than a quarter of century ago that the cell substance is the seat of vital expenditure, while in the nucleus resides the power of organic synthesis. This does not, however, in our opinion, exactly represent the relationship, for the nucleus is also the seat of expenditure, nay, appears often to determine that expenditure. But clearly the indications are that the higher syntheses, those associated with growth and those governing the specific enzyme actions of the different forms of cell, are determined and initiated by the nuclear matter.

4. The Nucleus in Pathological Conditions of the Organism.

Purposely when passing in review vegetative and proliferative phenomena I did not call attention to the evidence afforded by the study of the nucleus in cases of aberrant cell growth. It appeared advisable to consider the pathology of the nucleus by itself and from all aspects, and that, more particularly, because while the normal vegetative activities are not subjects for discussion this morning, there are those here present who, from their studies upon tumors, are prepared to speak upon the abnormal. At this point we have to call attention to the evidence of nuclear dominance afforded (1) by cases of abnormal cell growth, (2) by cases of disturbed function.

Regarding the first of these I shall be brief.

It may be stated unhesitatingly that the majority of pathologists at the present moment regard neoplasia or blastomatosis as essentially a condition of aberrant cell growth, brought about not by the constant stimulus of intracellular parasitism, but by some primary alteration of cell environment. As a consequence of such alteration, if I may quote myself, the energies which, had the cells remained in their normal relation, would have been devoted to functional activities, become diverted to vegetative and proliferative. Your active malignant tumor cell has characteristically all the attributes of a vegetative cell, or, as it is usual, perhaps unfortunately, to express it, is of the embryonic type.

Associated with this we find that the growing tumor exhibits abundant mitoses, and, what is more, the growth being aberrant, we find a well pronounced tendency for the mitoses also to be irregular. We thus encounter a great variety of changes, (1) dispersion of chromosomes in the cell body as the result apparently of rupture of the threads of the achromatic spindle, (2) asymmetrical mitoses, (3) multipolar mitoses, (4) hypochromatosis with diminution either in the number or in the size of the chromosomes, (5) hyperchromatosis with increase whether in number or size of the chromosomes. (6) Associated with degenerative changes and rapidly growing tumors we may encounter the development of paranuclear bodies (Nebenkerne), sometimes of large size and modified staining properties, lying in the cytoplasm and clearly derived from the nuclear matter.

The existence of these abnormal nuclear conditions in connection with tumor growth is most significant. Beyond this statement, that it is difficult to arrive at any other conclusion than that there is an intimate relationship between these nuclear vagaries and the abnormal cell growth seen in malignant tumors, I feel it is unsafe to venture; for, as Dr. Bashford, who is here with us, has frankly acknowledged, more advanced hypotheses based upon these abnormalities have not stood the test of extended investigation.

Turning now to observations upon the nucleus in pathological conditions other than those associated with aberrant growth, it may, in the first place, be noted that cases may be recalled bearing upon the cell when it passes into a latent or dormant condition. While we cannot go as far as Grawitz and accept the existence of "slumber cells," in which the nucleus and its chromatin have become so shrunken as to be invisible, we can, I think, note that with the arrest of cell function and passage into an inert state, the nuclei undergo shrinkage, becoming extremely small and attenuated, as in the fully-formed connective tissue, fully-formed fat cells, etc.

It is in connection with cell irritation and the commoner acute degenerations that the nuclear changes become most evident. It is a matter of familiar knowledge that pronounced changes take place in connection with cloudy swelling and, to employ the old term, fatty degeneration, as distinct from fatty infiltration of the cell. In cloudy swelling, which so commonly accompanies the acute fevers and conditions of intoxication, we note, more particularly in the cells of secretory glands, that the nuclei, which in the first stage of irritation may become more intensely stained, rapidly lose their staining property and become indistinct, and the cell body becomes filled with granules of albuminous nature. Stolnikow was apparently the first to make accurate studies upon the changes that occur in these degenerative processes; many

others have since noted the same collection of the chromatin in the region of the nuclear membrane; the discharge into the cytoplasm (well seen in the liver cells in phosphorus poisoning); have described these little masses as first staining like nuclear substances, and later losing the nuclear stain completely, the cell body becoming filled with shell-like clear-staining globules. The more recent work of Schmaus and Albrecht, Lubarsch and others has confirmed and extended these observations, the former observers calling particular attention to the formation of nuclear buds, as also to the hyperchromatosis and karyorrhexis in gradual death of the cells of various organs. There are, needless to say, other changes seen in the degenerating cell—pyknosis, or contraction and clumping of the nucleus and nuclear material; karyolysis, or complete disappearance of the chromatin. These are evidently post mortem conditions (that is, in the cell), and need not here be considered. From those first mentioned it would seem that the cell may recover. They represent exaggerated conditions of normal processes, but, where the latter stages show themselves, regeneration of the cells becomes hopeless.

As to the significance of this discharge of nuclear material, I shall have a little to say after we have discussed the chemistry of the nucleus. Professor Ewing is here, and he and others will, I trust, discuss the relationship of these modified nuclear discharges to the intracellular appearances which by many have been regarded as cancer and vaccine or variolous organisms.

5. The Chemistry of Nuclear and Cytoplasmic Matter Respectively.

Here, in studying the chemical composition of the two components of the cell, we meet with certain remarkable facts, for not a few of which we are indebted to our colleague, Professor Macallum. There are certain substances of great chemical activity bound up in the nuclei which are present to but slight extent, if, indeed, at times they can be recognized in the cell body. Notably is this the case with phosphorus (Lilienfeld and Monti, Macallum), as also with "masked" iron—iron, that is, in fairly firm combination, so that it is only loosened and made to respond to the tests for free iron after having been subjected to preliminary dissociative treatment. On the other hand, certain substances found to be present in the cell body are absent from nuclear matter. Among these, as Macallum has pointed out, are potassium and chlorides. When now we come to study the proteid contents of the nuclei, we find that these, unlike ordinary proteids of the cell body, are undigested by gastric juice, and that the undigested material consists of the nuclear network and its chromatin and the nucleoli. We owe especially to Kossel's investigations the

explanation of these peculiar features. Cell nuclei, that is, contain as a main constituent a special group of proteids—the nucleoproteids. These nucleoproteids split up into albumen (histon) and nucleins, and it is these nucleins in particular that resist the action of gastric juice, and further, are characterized by high phosphorus content. These, like the nucleoproteids, are of a proteid nature; upon further decomposition they yield albumen and nucleic or nucleinic acid, and can be further broken down into the xanthin bases or purin bodies. It is more particularly the existence of phosphorus and these xanthin bases that differentiate the nucleus from the cell body. How the iron is combined is as yet undetermined. We know at most from Spitzer's observations that it is the iron-containing products of dissociation of the nucleoproteids that retain the oxidative properties. But clearly in the nucleus we have as essential constituents compound proteids of great complexity of organization. As Spitzer, Herter, and others have indicated, the iron is of the utmost importance in bringing about oxidative processes, while the phosphorus likewise would appear to favor oxidative changes. These and other chemical considerations tend to the conclusion that nuclear material possesses in itself potentialities superior to those of any ordinary constituent of the cell body, and again support the view that the nucleus is the centre or source of the higher cell activities.

6. The Ferment Actions of the Cell and Their Relationship to Nuclear Activity.

Jacques Loeb, indeed, has been led to the conclusion that the nucleus is the centre of the oxidative processes of the cell, and the correctness of this view has of late been demonstrated by his pupil Lillie. It would open up too large a field to detail and weigh the data indicating that nuclear matter is the essential source of these bodies which afford the enzyme actions of the cell. We would merely note in passing that it is now universally accepted that much of the cell function—I do not say all—is the outcome of enzyme action, and I would recall the data already brought forward to show that in the absence of the nucleus the higher specific cell activities are at a standstill; the existence also of the relationship of the nucleus to the formation of zymogens.

Referring to the discharge of plasmosomes or spherules of nuclear matter into the cell body it may now be asked, What chemical processes do these indicate? It is suggestive that under normal conditions this discharge has been noted in cells affording specific secretions, and in abnormal conditions accompanied by the accumulation in the cell body of modified paraplasmic granules or globules. It is at least suggestive that in autolysis (the self-digestion of tissues removed from the body under aseptic condi-

tions) we note a diffusion out of nuclear chromatin, and following upon this the formation in the cell body of myelin granules and masses. Everything indicates that these myelin masses so formed are complex lipoid bodies; they contain fatty acids, more particularly oleates, and studying the composition of what is regarded as the simplest group, the lecithins, we find that they are compounds of a nitrogenous base (cholin), with glycero-phospheric acid and a fatty acid. Where these make their appearance in the cell undergoing autolytis (and probably in other conditions), we must conclude that the glyco-phospheric acid is of nuclear origin, and, leaving aside for the moment the question of the seat of origin of the nitrogenous base, remembering that the nucleus of the ordinary cell is devoid of fat, we are led to regard these lecithins as combinations between matter of nuclear origin and fatty matter from the cell body. These lecithins are bodies having very remarkable properties, both chemical and physical; they have great powers of holding other substances in solution, and this is true of all the myelin bodies. It may well be that the suggestive series of nuclear changes and cell accumulations which we find in the cloudy and fatty groups of degenerations, represents successive stages in which the development and dissociation of bodies of this type play the essential part. In our studies in Montreal during the last three years on calcareous and fatty degeneration this matter of the formation of compounds of albumen and fat has constantly been brought before us. Dr. Klotz (in this following upon the conclusions of Brucke long years ago) has brought forward data favoring the view that direct union may occur between the two; but he will be the first to admit that an absolute chemical proof of the existence of such compounds is singularly difficult to adduce. It is true that working with Professor Aschoff at Marburg, we have recently demonstrated the combination between nitrogenous bases, such as cholin and oleic acid, but this is another matter—nitrogenous bases while built up into proteids are not proteids. But if we are not as yet wholly certain of the existence of oleates of albumen, it is a well-ascertained chemical fact that lecithin can combine directly with albumen to form albuminates. Thus lipoids of the nature of the lecithins afford us the necessary linkage bodies between various albumens and between albuminons and fatty acids.* As regards their importance in this connection we would only call attention to Preston Kyes's remarkable observations upon the part played by lecithin as complement, or linkage body, between certain serum proteids and cell proteids and snake

* The mucins would seem to represent a parallel group of carbohydrate-proteid compounds, and the histological observations of Steinhaus, Maximow, and others demonstrate most clearly that nuclear matter is concerned in their development; indeed, in goblet cells, according to Steinhaus, there is a total conversion of the old nucleus of the cell into mucinogen. The figures given by this observer are of the same order as those afforded by Ewing of nuclear changes in epithelial cells in connection with vaccinia and variola.

venom. It is interesting to note how almost simultaneously during the last few months independent workers in Germany, France, the United States, and England, approaching the subject from wholly different points of view, have converged to the same conclusion—that the lipoids are of singular importance in the cell and in relationship to metabolic processes. We seem at the threshold and in its shadow, and see already the light within. But here at the threshold I must stop.

Before closing, however, there is a question which I doubt not has arisen in your minds, and one which must be answered: "You arrogate," it will be said, "all these powers to the nucleus. What part is played by the cytoplasm?" To this I would answer that, passing further and further backwards in our endeavor to comprehend what is life, if we believe in living matter and that vital phenomena are the expression of the effects of physical and chemical forces acting upon that matter, then our ultimate conception of life must be that it is the function, or the sum of functions, of a special order of molecules. For convenience, we would term these ultimate molecules of living matter *biophores*. However much we strain our imagination it would seem impossible to conceive the existence within the cell of two orders of molecules of widely different type, but of equal value, which, by their interaction, initiate vital processes. We must premise that there is in each form of life one primal order of living matter. If so, the biophores must be contained either in the nuclear matter or in the cytoplasm, and as we have shown that the higher vegetative powers of the cell are intimately associated with nuclear matter, it is in the nucleus that we must locate these biophores, and we must therefore regard the cytoplasm as composed of subordinate matter, and as having what must be termed subvital functions.

Now, the simplest conception that we can form of these biophores—and even in the very lowest forms of life they must be singularly complex—is that they are rings or rings of rings, carbon and nitrogen containing, and of the benzol type. The only satisfactory conception of growth, of multiplication of these molecules, is that the pre-existing rings possess unsatisfied affinities, and attract side-chains of various ions, simple and compound, from the surrounding media, and that these become grouped in a manner identical with the grouping present in the pre-existing biophore. In other words, we must regard the building of the new biophoric molecules as obeying laws of the same order as those which determine the building of ions out of a solution to form crystals of a particular form of salt, but with this difference, that so far we have no evidence of biophores becoming formed anew save under the influence of pre-existing biophores—we know no case of spontaneous generation. Thus, growth demands affini-

ties and side-chain formation on the part of the biophores. As with evolution the biophoric molecules have become more complex, we would suppose that ions and radicals have become attracted and attached not in ring arrangement but in loose series and loose connection with the biophores. As in growth new biophoric molecules are formed in association with the pre-existing, the result is an inevitable tendency towards the grouping of the biophores in a central mass surrounded by a zone of other attracted matter. With the development of such a complex system the biophoric molecules proper are no longer in direct and immediate relationship with the outer medium; there is interposed between the two an intermediate mass. The direct attraction of new matter is, in the main, accomplished by the intermediation of this outer cytoplasmic zone. So that eventually we reach the stage in which with increasing complexity of organization the biophoric molecules proper, deprived of the outer cytoplasmic zone, are unable to attract ions to themselves in the proper order—these must first have been built up into particular orders of radicals within the cytoplasm. In other words, the presence of performed cytoplasm becomes essential for the continued existence and growth of the nucleus—of the nuclear-biophoric matter. Each becomes essential for the continued existence of the cell as a whole.

This, frankly, is all hypothetical, but it is the hypothesis which seems best to throw light upon and to harmonize the data we possess regarding the function and the relative importance of nucleus and cytoplasm respectively. Nay more, it is in harmony with what we know concerning the very lowest forms of life, and their imperfect nuclear development.

To-day I feel I shall have done some service if I have demonstrated the dominance of the nucleus and impressed you with the conviction that the future will see not merely a cellular but a nuclear pathology and physiology. From the *omne vivum ex viro* to the *omne ovum ex ovo* and the *omnis cellula e cellula* of our predecessors we now reach the *omne chromosoma e chromosomato* of the modern student of development and see before us surely the conclusion *omne biophorum ex biophoro ejusdum generis.*

If this be the ultimate conclusion of the investigator, it is at the same time the point from which chemist and physicist, anatomist and physiologist, pathologist and physician must start to develop harmoniously, each along his respective line, their various conceptions of vital processes, and, as the indications are that these biophores exist in the nucleus, so it is that to the nucleus and its alterations each of us, whatever his particular branch of biological science, must apply himself for the fullest, intimate grasp of the succession of changes that take place in health as also in disease.

Discussion.

Professor A. B. Macallum (Toronto) said: The problems of the nucleus which appear to be most important are: (1) How the nucleus arose in the primeval cell; (2) how and why mitosis originated; (3) whether the nucleus elaborates out of the materials diffusing into it its own chromatin or derives the chromatin already prepared from the cytoplasm; (4) the part played by the nuclear membrane. The origin of the nucleus has not yet been studied as a definite problem, and will be attacked only when a comprehensive survey of the cytology of the protozoa and of certain non-nucleated vegetable forms is accomplished. As to the origin of mitosis nothing has been really done, for though we know much of the phenomena of mitosis, this has been obtained from studies and observations on forms in which after millions of years the processes have been definitely fixed. These forms, therefore, would not reveal the stages by which mitosis originated, and until we do find these stages in some cells, it is idle to speculate whether mitosis is due to electrostatic or osmotic forces. It would seem to be of more promise to study the nuclear division in forms which are in their metabolism typically neither animal nor vegetable, for these must, in some cases at least, be representative of forms which existed before the differentiation of organisms into animal and vegetable began, and in which the process of nuclear division should also show a mitosis of a primitive type, thus giving a clue to the origin of this mode of division. The value of work in this line has been shown by the studies of Keuten on *Euglena* and of Lauterborn on *Ceratium hirundinella*, in the former of which, the mitosis, if the process indicated can be so called, is very atypical, and in the latter the nuclear division is such as to suggest that it represents a very early stage in the evolution of mitosis. That division can obtain and does obtain which is certainly not mitotic has been proved by the results of Schaudinn's studies on *Calcituba polymorpha*, a foraminifer in which there is no nuclear membrane in the resting condition, but one develops during the division. According to Schaudinn, a number of other foraminifer forms show a similar mode of division. The nucleus is free from inorganic salts even when these are abundant in the cytoplasm. Chlorides, and notably chloride of sodium, which is so common a constituent of tissues, are not even in infinitesimal quantities found in the nucleus. This indicates that the nuclear membrane has the function of preventing the entrance to the nuclear cavity of inorganic compounds. It must permit the diffusion from the nuclear cavity of colloids, for otherwise the zymogens could not form. This would indicate that the membrane has properties very different from those of a typical semipermeable membrane (parchment) used in osmotic experiments. Such a nuclear mem-

brane, on the other hand, finds its parallel in the observations of Kahlenburg in the *Amer. Journ. of Phys. Chem.*, vol. x., page 141, on rubber membrane separating solutions of sugar and either camphor or copper oleate in pyridine, in which the membrane permits the colloids (oleate or camphor) to pass through, but not the sugar or other crystalloids. Kahlenburg holds that the dialyzed substance is transmitted because the rubber combines with it first. Accepting this explanation and applying it, we can suppose that the substance of the nuclear membrane unites with the colloids and thereby passes them outwards or inwards, while it will not absorb and combine with the salts. This property of the nuclear membrane also explains why the nuclei of the male and female cells are not affected by the constitution of the parent organism.

Dr. Gustav Mann (Oxford) drew attention to the fact that ordinary somatic cells during active metabolism resembled male cells in their large increase of nuclear chromatin, while resting cells resembled the ovum in possessing a large amount of nucleolar matter. During normal metabolic processes in Drosera there is a nuclear change resembling karyokinesis, but only one half the number of segments occurring in normal karyokinesis is found. By the administration of antipyretics it is possible to greatly retard nuclear oxidative processes, and thereby to postpone the increase of nuclear chromatin which occurs after feeding with peptone from five minutes to thirty hours. It was suggested that researches along these lines ought to be undertaken with the view of an ultimate chemical means of treating cancer. In addition to the absence of the ordinary halogen salts to which Professor Macallum drew attention, he pointed out the absence of sulphur in the nucleoproteids, and such nucleoproteid derivatives as hemoglobin.

Professor E. Wace Carlier (Birmingham) said: The nature, origin, and function, if any, of the nucleolus is much disputed. The term "nucleolus" has unfortunately been applied by different authors to different bodies, and here only true nucleoli (pyrenin) are considered. When the trophochromatin decreases during nuclear activity, the nucleolus increases in amount, to be then cast out from the nucleus at the first opportunity, that is, as soon as the nucleus takes up a food supply from the lymph. As chromatin is reproduced in the nucleus, the nucleolus also increases in size, and finally is expelled either bodily or after fragmentation. The same thing occurs in the ova of the hedgehog after the growth period and before reduction mitosis. Therefore with Haeker I believe pyrenin to be effete material, unavailable for nuclear activity directly, as maintained by some, though after resolution in the cytoplasm it may become useful.

Further, zymogen is not derived from nucleolar material, but directly from chromatin with pyrenin as a by-product.

Dr. Herbert E. Roaf (Liverpool) said that the eggs of the sea-urchin when grown in sea water to which minute traces of alkali have been added exhibit increased rapidity of growth with a tendency to irregularity in size and shape of cells. The nuclear divisions accompanying this irregular growth show a typical mitosis (multipolar mitosis, irregular distribution of the chromosomes, etc.). Similar experiments, in which acid was used instead of alkali, show that acid does not cause any increase of growth but from the beginning inhibits the growth.

Dr. Bashford (London) said: From the outset of investigations of the Cancer Research Fund the work has proceeded on the basis that cancer was a cell problem requiring to be approached from the experimental aspect. This problem required to be attacked under conditions more favorable than those obtaining in man. Since we have found the disease pervading the entire vertebrate phylene we have studied the processes of cell division under the favorable—the classical—conditions obtaining in the amphibia. We have found that the so-called heterotypical mitoses have no existence in fact. In the case of tumors which can be propagated there is nothing to indicate the inter-relation of this form of cell division, nor of anything of the nature of nuclear fusion or fertilization. The irregular forms of cell division are apparently subsidiary phenomena. What requires explanation is the apparently ceaseless proliferation by normal bipolar mitoses, in which the normal number of chromosomes is retained. The cell division is, however, only the terminal phase in the growth of the cell itself, and merely the most evident expression of the more complex problem of cell nutrition which lies at its basis. Thus stated it is not so much the power of ceaseless proliferation as the ceaseless power the cells possess of nourishing themselves.

Veronal in the Vomiting of Pregnancy.—F. M. Rowland, of Lichfield, Eng., reports the following case of interest, both from the gravity which it at one time assumed, and from the markedly beneficial effect produced by large doses of veronal administered rectally at a time when the question of procuring abortion was seriously under consideration: A healthy primipara, aged twenty-nine, developed serious symptoms of vomiting at the end of the second month of pregnancy. Nothing was retained by the stomach, and the retching and vomiting prevented her obtaining any sleep for more than a few minutes at a time. No improvement resulted from treatment by any of the following measures,

namely: Iced champagne, effervescing saline mixtures, vinum ipecac. m. j. every hour; cerium oxalate, gr. v. four-hourly; complete rest, careful constant nursing, entire rectal feeding, everything by the mouth being stopped. Hypodermic injections of strychnine were given to improve the pulse, which became rapid and feeble. Potassium bromide, gr. xxx., was given in one of the nutrient injections, and repeated in two hours, without any appreciable effect, and no relief followed morphine, gr. 1-4, hypodermically. At the end of three days veronal, gr. xxxii., in powder, was administered in a nutrient injection. The patient fell asleep within half an hour, and slept well for eleven and a half hours, and at intervals afterwards for the next six hours, merely rousing up while the nutrient injections were given. No vomiting occurred for twenty-five hours after the administration of the veronal, but after that time it gradually returned, though not to the same distressing extent as formerly, and during the following ten days small quantities of Brand's essence, kreochyle, dram doses of pepsin wine, peptonized milk, lime-water and barley-water were occasionally retained for a few hours. At the end of that time, as sleep was chiefly being obtained in snatches of one to one and a half hours, and as the patient was not getting on, another dose of veronal, gr. xxxii., was administered by the rectum. This was followed by ten and a half hours' sleep, with no ill effect other than a purpuric rash on the arms, which passed off in twenty-four hours. Vomiting recurred at intervals, but the patient gradually began to take more varied nourishment by the mouth, the nutrient injections being continued as well for a time. Sleep was obtained naturally in longer periods each day, and a week after the veronal she was getting from five to nine hours daily without the aid of drugs. The intervals between the attacks of vomiting became longer, and by one month from the commencement of the illness she was convalescent, taking ordinary food, and geting out each day. Since that time, four months ago, she has remained quite well, and quickening took place normally. The sleep obtained by the veronal was apparently sound and peaceful, and the patient awoke refreshed and feeling better in every way. Apart from some amount of dysmenorrhea and an attack of ovaritis (?) two years previously, the history was good, and there was no evidence of any co-existing renal or cardiac mischief, and the position of the uterus was normal.—*British Medical Journal*, Nov. 24, 1906.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

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Editorials.

THE WARM INFUSION OF MALT IN THE THERAPY OF GASTRIC DISORDERS.

EVERYDAY experience reveals the beneficial effects of warm drinks in gastric therapeutics. Used at meals they are valuable, owing to the fact that they act simultaneously on the sensory, motor and secretory functions of the stomach. Warm drinks relieve pain of the stomach by diminishing its hypersensitiveness. They act on

its motor power by stimulating its unstriped muscular fibres, making them contract just in the same way as an injection of hot water brings about contraction of the womb in a case of uterine hemorrhage.

They promote the working of the active agents of gastric digestion; for, as pepsin acts most powerfully at temperatures ranging from 104 deg. to 122 deg. F., the digestion of albumen takes place under favorable conditions of temperature when warm drinks are taken at meals.

Plain warm water, chamomile tea, weak tea, etc., are commonly used to obtain the desired effects.

Dr. Leon Meunier (*La Presse Medicale*, January 16, 1907), recommends the use of an infusion made by pouring hot water over powdered barley malt, and he claims that in addition to its general properties as a warm drink, this warm infusion also exercises a special action in gastric digestion. As is well known, when barley is steeped in water and dried in a kiln, germination of the grain is forced; under this influence, diastase, the digestive ferment of starch, is formed around the developing embryo. The diastase, penetrating into the starch reserve of the barley grain, transforms the starch into hydration products, soluble starch, dextrine, soluble grape sugar. The barley thus changed forms malt, which is used in brewing and in the distillation of whiskey. In brewing, the malt is exhausted by boiling water, which dissolves the soluble substances derived from the starch, and it then yields a sweet fluid, known in brewing as sweet wort, which, after special manipulation, is changed by fermentation into beer.

In the treatment of barley malt with boiling water, as in brewing, the ferments of the starch totally disappear, diastase being in fact destroyed at a temperature of about 212 deg. F.

But if, instead of pouring boiling water over the malt, as is done in brewing, we use water having a temperature of 158 deg F., we get not only a sweet wort but also an active solution of diastase. The reason of this is that the diastase, which is in solution in the water, attains its maximum of saccharifying action at temperatures ranging between 140 deg. and 176 deg. F.

The sugar-producing properties of an infusion of malt prepared in this fashion can be demonstrated by placing the malt infusion in contact with a solution of starch in a stove, at a tem-

perature of 104 deg. F. Under the influence of the diastase present in the malt the starch is changed into sugar, the presence of which may be shown qualitatively or quantitatively by the employment of Fehling's solution. In man, the changes of starch into sugar in the stomach, that is to say, the digestion of all vegetable foods, is produced in a similar way by the action of the diastase contained in the saliva (ptyalin). But the diastasic action, which begins during mastication and continues in the stomach, is often seriously interfered with. It is well known that, owing to different influences—too rapid mastication of food, exaggerated secretion of hydrochloric acid in the stomach, which destroys the salivary ferment in the stomach, the digestion of starch is seriously impeded in the majority of cases of gastric dyspepsia.

It is reasonable to suppose, therefore, that in severe cases of gastric dyspepsia the use of a warm infusion of malt would assist in overcoming the insufficient conversion of starch into sugar in the stomach, and would thus improve the digestion of starch. Dr. Meunier says that this fact can be shown after administering a test meal. If on two successive days you give the same patient an Ewald test meal consisting on the first day of bread and tea and on the second day of bread and a warm infusion of malt, the soluble sugar will be found more abundantly in the gastric juice secreted during the second meal than that secreted during the first one.

To get the maximum of saccharifying action in an infusion of malt Dr. Meunier recommends that it should be prepared like a cup of French coffee; grind a tablespoonful of malt in a coffee mill and exhaust it in a coffee filter having a flannel bottom, with a teacupful of water, which is almost boiling. On principle, water of a temperature over 176 deg. F. should not be poured over malt, as the diastase is destroyed at a temperature of 212 deg. F. As a matter of fact, however, water which is almost boiling may be employed for this purpose, because the hot water used in making the infusion of malt loses some of its heat when it is in contact with the flannel strainer of the coffee filter, and thus comes into contact with the ground malt at a temperature of about 176 deg. F., as Dr. Meunier has proved.

This warm infusion of malt may be drunk during or after meals. Speaking generally, Dr. Meunier contends that in addi-

tion to its general qualities as a warm drink malt tea has special therapeutic properties. Taken at meals, it favors the conversion of starch into soluble sugar and thus improves the often enfeebled digestion of all foods of vegetable origin. J. J. C.

THE MARIA LOUISA ROBERTSON RESIDENCE FOR NURSES.

Only a dream realized, perhaps, to the man who plans and then carries his ideas to a perfect culmination; but a gift so great in reality, and an example in giving so generous that words other than a simple "Thank you" addressed to the donor, Mr. John Ross Robertson, would be fulsome.

To give in detail all the comforts, luxuries and necessities that lie within the four walls of the new Residence for Nurses would fill a journal. In the February number of *The Canadian Nurse,* the editress, Dr. Helen MacMurchy, has splendidly filled this need, by description and illustration, and we heartily commend this number of the *Nurse* to physicians whom distance prevented enjoying "a look in" on the opening day.

The corner-stone of the building was laid October 7th, 1905, and the Residence formally opened February 5th, 1907, by Mr. Goldwin Smith in the presence of the Lieutenant-Governor and many physicians and other friends of the donor of the institution. The nurses call it "The Nurses' Paradise," and paradise it is. Its general arrangement, equipment, coloring and furnishing are complete, pleasure-giving and luxuriously comfortable. The gymnasium, the baths, the swimming tank, writing and reception rooms, sewing rooms, pantries, broom cupboards, and big refrigerators ice-filled from without,—in short, every modern invention and improvement is there to enjoy and conjure with.

The young women who receive their probationary training amid such surroundings are doubly equipped for their chosen life-work. They emerge with sound bodies, steady nerves, and with that touch of delicacy and brightness that the environments of beauty and refinement always impart. True, they may often suffer, and stifle a sigh of regret as they undertake work later on among patients whose homes lack even the comforts to which their student years have accustomed them; and then, should

Cupid plead a poor man's cause successfully, will discontent creep in? Well, the answer to that question we leave to the Man in the Moon. W. A. Y.

A HYGIENIC INSTITUTE AT LONDON, ONTARIO.

The Ontario Government has decided to make a grant of $50,000 towards the erection of a hygienic institute in the city of London, and to give $5,000 per annum for five years towards its maintenance. This step is in accordance with the policy of the Government to encourage medical education in sections of Ontario other than those adjacent to the facilities afforded at the University of Toronto.

It is understood that the city of London will give a free site for the institute and also vote a sum, perhaps equalling that given by the Government, towards the cost of the building. In addition, the city of London will build a contagious diseases hospital, separate from the institute, but with which the staff of the institute will co-operate whenever occasion may require. It is also expected that there will be a certain amount of revenue from fees paid by students, and from the fees charged for the examination of water, milk, food products, etc.

Dr. W. M. English, Chairman of the Local Board of Health of London, Ontario, has kindly written us on this subject, and we refer our readers to his letter, which appears at p. 183 of this issue. J. J. C.

WHAT IS MEDICAL EXPERT EVIDENCE WORTH?

In connection with the recent telephone operators' strike, counsel on both sides summoned their quota of medical practitioners to give testimony on such points as whether or not eight hours' work was too much for the average operator, etc. We understand that the counsel for the girls, when certain discussion took place in court as to whether the physicians summoned were entitled to collect expert fees, or only the usual four dollars per day as provided by law for the payment of a medical witness, made the statement that any physician who was served with the usual subpœna had to come, if necessary, without being paid at all for his

services. This is, of course, all nonsense, but it brings up the point so often discussed, and referred to in this JOURNAL several times during the past ten years, *viz.*, what a physician is entitled to for attendance in court. This all depends upon the character of the evidence he is called upon to give. We do not agree with those who claim that four dollars a day is a sufficiently large fee for a medical man who gives evidence in a court room. No professional man should be expected to sacrifice his time at this rate, especially when it is remembered that to be summoned to any court means, as a rule, a waste of time to the extent of at least a couple of hours. What lawyer of any standing is there who is willing to devote two continuous hours of his time to a client's case for any such paltry sum? We venture to think that his fee would be considerably more. The same applies to other professions and callings. Taking it for granted, however, that four dollars is a fair fee for a medical witness' attendance in court, it is entirely different when a man has to give what is ordinarily termed expert testimony. An ordinary witness must only state facts; but when he is called upon to give an opinion as to matter depending upon special knowledge, he has every right to be paid accordingly. The medical gentlemen who appeared in the Telephone case were giving evidence as to their opinion on certain points depending upon their professional knowledge, an opinion which could not be passed upon by a layman, and a fee of four dollars a day for such evidence is entirely inadequate. The matter of the payment of an expert witness' fees is looked upon in different lights by different judges. One High Court judge, we understand, not long ago decided that, not only was an expert witness a compellable witness, but that he could not demand for his services in court more than the usual four dollars *per diem*. Judge Morson, on the other hand, not long ago, in the Division Court, gave judgment in favor of two Toronto practitioners who had sued for fees as experts what amounted to about $50 per day, giving it as his opinion that an expert, if an expert, was entitled to collect a reasonable sum for his services. However, the only way to settle this mooted point is for some professional brother, who has a little more courage than others, to fight it out and enter action for reasonable remuneration (say $5.00 an hour as a minimum). A College Street physician not long ago sued the Toronto

Railway Co. in the Division Court for his fee in connection with an accident, and, unfairly, we consider, had judgment entered against him. He said that all he desired to get was the ruling of the court for the sake of his professional brethren. Let the Medical Council take this up and get a ruling as to this by securing such legislation as will for ever set this matter to rights. Alfred Swayne Taylor once said that no man has any right to enter the witness box to give expert evidence unless he knows *all* about the subject under discussion. That, of course, is too sweeping a definition, and, if literally followed, would mean that no such personage as an expert existed. As to whether some of our *confrères* who figured in the case to which we refer, could, even in the ordinary acceptation of the word "expert" be considered as such, we leave to the Philadelphia lawyer whose specialty was the reading of illegible chirography. W. A. Y.

IMPORTANT QUESTIONS TO BE DISCUSSED AT THE NEXT MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

From a letter sent by Dr. D. J. Gibb Wishart, Chairman of the Committee on Papers and Business of the Ontario Medical Association, (*vide* p. 184), we learn that arrangements are being made to hold general discussions on several important questions at the next annual meeting of that association. These discussions will refer to the relations of the medical profession to the public, and are to be taken up under four heads: (*a*) Medico-legal Aspects, embracing the subjects of coroners, post-mortem examinations, medical evidence, court fees; (*b*) Public Health Aspects, embracing county medical health officers, attendance upon the poor, fees for registration of births, deaths and infectious diseases, compulsory vaccination, etc.; (*c*) The Ideals for Ontario in Asylum Work; (*d*) The Water Supplies of the Province, and the methods for the prevention of their infection. We learn that the opening of these discussions has been placed in the hands of competent men and that authorities upon the various matters referred to have been invited to discuss the papers, many of which have already been received.

It is also stated that the programme of papers on medical and surgical subjects is already well advanced.

There is, therefore, good reason to believe that an excellent programme will be provided at the next annual meeting of the Provincial Medical Association. It is earnestly to be hoped that many physicians will be present to give to the subjects discussed the weight which their importance deserves. The physicians of Ontario, who number nearly 3,000, should evince towards their Provincial Medical Association a little of that enthusiastic loyalty which helped to make a success of the meeting of the British Medical Association last August. J. J. C.

A REMARK OVER THE TELEPHONE.

Again a labor problem forces itself upon the public, and its weary droning of pros and cons is a subject for newspaper, pulpit and fireside discussion. We refer, of course, to the strike of the "Telephone girls," and the investigation or inquiry now going on. The subject only concerns medical journalism inasmuch as it has to do with the health of a portion of the community. A delicate woman has not any business in the jostling highways of city work-a-day life. There are so many truly womanly occupations now open to her. Honest wages must be honestly earned. It is dishonest for incompetents to seek places and crowd the labor market with fainting foolishness. Consequently a person applying for such a nerve-wracking work as a telephone operator, or a kindred occupation, should be submitted to examination by a physician on application for the position, and, if appointed, be re-examined twice annually. We deem this expedient would be just to both employer and employee. It certainly is conducive to neither the health nor morals of women "to strike," and such scenes as we witnessed of striving to keep one another "out" were more disturbing to the nerves of the striking operators than days of listening to the urgent "hello's" of persons in a hurry to transmit a business message. All work has more or less strain, and all the world's workers are aweary at times; but it has to be done, and there are plenty willing, and from a "health" standpoint, quite able. 'Tis marvellous how health often improves when wages go up. Surely the disease most prevalent in this day and generation is discontent. We cannot discuss work in its

relation to wages and hours here; it is not the province of a medical journal, and, if the subject were thrust upon us, we could only stagger at the thought. There is but one Upton Sinclair in this generation, and on his shoulders he carries the burden of discussing the great labor problem. Would he had the power to solve the problem, and that harmony might come into the lives of the Classes and the Masses alike, and silence forever the discordant slogan of the world's wage-earners:

> "Our blood splashes upward, O our tyrants,
> And your purple shows your path;
> But the child's sob curseth deeper in the silence
> Than the strong man in his wrath."

February 17th. W. A. Y.

PYORRHEA ALVEOLARIS AND THE DUTY OF THE PHYSICIAN.

At the Fifteenth International Congress of Medicine, in the section of Laryngology, Rhinology, Otology and Stomatology, Dr. Jaime de Losada read a paper on the treatment of pyorrhea alveolaris, an abstract of which appears in *The Lancet* (London), May 5th, 1906, p. 1272. He said that the first class of case was characterized by the inflammation of the edge of the gum, produced by the mechanical irritation of tartar. The second class was distinguished by the complete absence of mechanical irritation, and the malady was largely confined to the periosteum. In the first class the affection originated in the region of the root, the remainder of the fang being normal. The prognosis was favorable, and the treatment consisted in the removal of the cause of irritation, curettage, and the cleaning away of every particle of foreign matter, proceeding as far down the fang as was necessary and cleaning out all pockets with a jet of hot water, containing some germicidal and astringent agent in solution, such as trichloracetic acid.

In the second class the prognosis was usually unfavorable, but treatment should be commenced at the earliest possible date. It should consist chiefly of general hygiene of the mouth and constitutional remedies for arthritis should be administered; curettage and germicidal and astringent irrigations should also be employed in these cases. Perchloride of mercury was especially recom-

mended as an antiseptic. A third class of cases was distinguished by degeneration and increase of periosteum of the fang, frequently accompanied by the formation of calculi, together with the presence of urates and calcareous plaques. The prognosis here depended largely on the intensity of the gouty diathesis, and the treatment should be principally constitutional. The local treatment was much the same as that recommended in other cases.

Professor Osler, in *Practice of Medicine*, p. 439, says: "Pyorrhea alveolaris is the most common cause of foul breath in adults and is almost constantly present after middle life, causing a perfectly distinctive odor, only too well known to most of us. To test for its presence draw a bit of stout thread or the edge of a piece of paper high up between the teeth and the gums and then smell it. Scrupulous treatment of the gums by a dentist is needed and daily scouring, etc."

In "A System of Clinical Medicine," by Dr. Savill, London, 1903, the author, after describing pyorrhea alveolaris, says: "The discharge from the mouth not only imparts an offensive odor to the breath, but, being continually swallowed, is absorbed and sets up a chronic toxemic condition which, it is now recognized, may produce a large number of troublesome symptoms. Dyspepsia, even apart from difficulties of mastication, invariably ensues, sooner or later. But, even before the dyspepsia becomes established, the patient is listless, languid and unfit for work, and complains of a great variety of functional nerve symptoms. Among the symptoms due to this cause I may mention headache, neuralgia, pain or tingling in the limbs and prostration attacks of flushing, shivering or giddiness, a feeling of heaviness and swelling of the limbs, which is sometimes attended by actual odema of the ankles, wrists and other parts, which differs from ordinary anasarca in requiring longer pressure to produce the pit. Great depression is usual, and even melancholia may result—one of my patients committed suicide."

In reference to treatment Dr. Savill recommends the removal of the tartar and the careful dressing of the suppurating pockets with sulphate of copper or some other mild escharotic at intervals of a week or two, later on a few months. He thinks that the only radical cure is the removal of the teeth or stumps. Cases also occur in which symptoms of pyorrhea alveolaris arise from stumps which are left beneath an artificial plate. If pyorrhea is

not recognized as the cause and removed, no treatment is of much use.

These and other pertinent remarks, which could be multiplied if necessary, go to prove that the diagnosis of pyorrhea is of the first importance if we would benefit our neurotic patients, many of whom suffer from a disease which has not been sought for, or which, if recognized, has not been treated.

First recognize the disease and then treat it.

The treatment of pyorrhea alveolaris should be carried out by a dental surgeon; but there are degrees of competence in dental surgeons, and some of them are more conscientious and painstaking in caring for the unfortunate sufferers from pyorrhea alveolaris than others. Study, practice, a good set of tools and the patience and skill to use them adroitly and gently, are necessary if teeth which are beginning to show signs of parting company with the gums are to be retained. We know of a patient who, after having received thorough treatment for pyorrhea alveolaris from a dental surgeon, derived benefit, not only in the improved condition of his teeth and gums, but also in freedom from dyspepsia and absence of neurotic symptoms. The cure in this case was effected by the methodical treatment of nearly all the teeth left in this patient's mouth, and nothing more, except a well-regulated diet.

Perhaps a doctor may think that he would be better employed than in finding cases for a dental specialist; but, after all has been said, the diagnosis of disease or diseased conditions and the restoration to health of a patient are the primal objects of medical science and surgical art. Should a medical practitioner discover, by making Dr. Osler's simple test, that a patient has pyorrhea alveolaris, the honest course to pursue is to send the patient to a competent dental surgeon for treatment. J. J. C.

MEETING OF THE AMERICAN ANTI-TUBERCULOSIS LEAGUE AT ATLANTIC CITY, N.J., JUNE 1-4, 1907.

Dr. George Brown, President and executive officer of the American Anti-Tuberculosis League, issues "A Plea for Humanity."

The next meeting of this association will be held at Atlantic

City, New Jersey, June 1-4, 1907, under the auspices of the following Reception and Entertainment Committee: Dr. Edward Guion, Vice-President and Chairman, Atlantic City, N.J.; Dr. Theodore Senseman, Vice-President, Atlantic City, N.J.; Dr. D. Edgar Darnall, Vice-President, Atlantic City, N.J.; Dr. J. A. Joy, Vice-President, Atlantic City, N.J.; Dr. A. B. Shimer, Vice-President, Atlantic City, N.J.

Physicians and sanitarians desirous of attending this meeting should write to Dr. Edward Guion, Chairman Reception and Entertainment Committee, Atlantic City, N.J., for hotel rates and reservations.

The American Medical Association meets at Atlantic City, June 4-7, 1907. Members and delegates can attend the meetings of both bodies, as the dates do not conflict. J. J. C.

EDITORIAL NOTES

Multiple (Insular: Disseminated) Sclerosis (Sclerose en Plaques.)—This chronic affection of the brain and cord, characterized by localized areas in which the nerve elements are more or less replaced by neuroglia, has been studied by Guinio Catola (Florence). A paper giving the results of his recent observations appears in *Nouvelle iconographie de la Salpetrière*, 19e Année, No. 4, Juillet, Août, 1906, p. 337-361, 4 pl., hors texte). The author makes a critical study of the syphilitic origin of insular sclerosis. From the numerous bibliographical papers which he mentions and from researches made by himself in Dr. P. Marié's laboratory, he concludes that the foci of syphilitic sclerosis may possess all the histological characters of common insulated sclerosis. Consequently, he admits that syphilis may be a causative factor in the etiology of insulated sclerosis, and that there is a syphilitic insulated sclerosis, which compares closely with forms of that disease originating in some other infection. This notion is not new and has evidently, ere now, influenced practitioners in the treatment of insulated sclerosis. Dr. Osler says in *Practice of Medicine*, p. 931: "No known treatment has any influence on the progress of sclerosis of the brain. Neither the iodides nor mercury have the slightest effect, but a prolonged

course of nitrate of silver may be tried and arsenic is recommended."

The Weight of the Brain and its Relations to Physical and Mental Labor.—A contribution to this question which weakens the notions formerly prevalent on it, appears in *Revue v neurologü, psychiatrii, fysikalnia diaeteticke therapie,* Prague, 3e Année, Septembre, 1906. No. 9, p. 415-418. The author's conclusions are as follows: "It can be shown by the aid of figures that there are certain relations between the weight of the brain and its functions. These relations may be due to two causes: On the one part, cerebral aptitude for any work is due to the physical and psychical properties of the brain; on the other hand, work of the brain exercises, in turn, an influence on its own physical and psychical properties. Remarkable differences in brain weight have been noted in individuals of different sex, age and stature, and these differences have been influenced by the development of the muscular system, by alimentation, by the degree of health or illness, or by the form of death. Finally, intellectual work is not the sole factor in producing the weight of the brain, but it has some influence therein."

The Mortality of Paris During the Nineteenth Century.—M. Bertillon, at a meeting of the Academy of Medicine of Paris, Jan. 2, 1907, showed that a considerable reduction in the mortality of Paris had taken place in the course of the last century. During the Restoration it ranged from 32 to 33 deaths per 1,000 inhabitants; in 1860 it fell to 26 per 1,000; to-day it is 19 per 1,000. The principal factor in the reduction of the mortality is the diminution in the infantile deaths. The principal causes of death which have most contributed to the lessening of mortality in Paris are infectious fevers (notably typhoid fever and diphtheria), diseases of the respiratory organs and infantile diarrhea. The mortality from tuberculosis is high. Slightly diminished since 1886, it is still, however, 456 per 100,000 inhabitants, or 4.56 per cent., a much higher figure than that of London, Berlin or Vienna, where the diminution has been greater. In many diseases (heart diseases, liver diseases), the mortality remains stationary. In two, however, nephritis and cancer, the mortality has increased.

Pernicious Anemia and Typhoid Fever.—In a paper read at the Society of Internal Medicine of the Hospitals of Paris (December 27, 1906), Drs. Vaques and Esmein stated that if the causes of pernicious anemia escape discovery in the greater number of cases, it appears certain, nowadays, that this disease may be provoked by acute infectious diseases. Destruction of the blood is effected by such agents, owing to the presence in the blood of microbes which have a hemolytic property. These authors observed a case of typhoid fever complicated with grave anemia. Red blood cells, 180,000, leucopenia, a total myeloid reaction; serious hemorrhages in different parts of the patient's body were also noted. The Widal reaction and the diazo-reaction were positive, and a culture of the patient's blood enabled the observers to isolate a streptococcus and a real Eberth bacillus, which became agglutinated when acted on by the blood serum of other typhoid patients. The patient (a female), who was treated, according to custom, with baths and an abundant diet, recovered without any other complication. A similar case has been recently reported by Drs. Mouisset, Mouriquand and Thevenot. The authors of the paper thought that the progress of hematology and its more common practice will enable practitioners to show more frequently the agency of similar disorders in the production of pernicious anemia and, by such means, will reduce the number of anemias of obscure or doubtful origin.

Acute Pleurisy.—In the International Clinics (Vol. 4, 16th. Series), A. A. Stevens states, in reference to the treatment of acute pleurisy, that the patient should be confined to bed until the exudate begins to recede. Temporary relief of pain may be given by a hypodermic injection of morphia, but the application of leeches or of a few wet cups is preferable. Thin poultices may be applied to the chest after the local bleeding. He has found that strapping the affected side with adhesive plaster does not relieve the severe pain in the side. In sthenic cases he has found salicylate of sodium useful, in doses of a dram or a dram and a half in 24 hours. In the great majority of cases, however, this remedy is useless. Medical treatment can do little to promote the removal of the exudate. He has given up the use of iodide of potassium as an absorbent of the exudate. Counter-

irritation by means of flying blisters appears to exercise a favorable influence in promoting absorption of the exudate and, in vigorous subjects, the use of saline purgatives is sometimes serviceable for the same purpose. Irrespective of the period of the disease, paracentesis is urgently required: (1) When the fluid in the pleural sac excites cough, dyspnea, cyanosis or failing pulse; and (2) when the fluid reaches to the level of the third rib, and there is displacement of the neighboring organs. The immediate prognosis is favorable, the remote one unfavorable. The after treatment should be that laid down for incipient tuberculosis—a life in the open air, full diet, tonics, such as iron and arsenic.

A Good Way to give Cod-Liver Oil to Tubercular Children.—A good way of giving cod-liver oil to tubercular children, says Dr. Savill, is to pour away the oil from a box of sardines and replace it by cod-liver oil. After standing for 24 hours the oil becomes flavored by the sardines, and both can be given together to the child. A suitable dietary should accompany this treatment. An important consideration in the feeding of children under two years of age is that great care should be exercised in the cleanliness and asepsis of the milk given them. If this were done effectively, tabes mesenterica would become less frequent. This wasting disorder occurs for the most part in children of two years and upwards, and is due to tuberculosis of the mesenteric glands.

The Blister and Leucocytosis.—Drs. Carriere and La Griffoul (Montpellier, France) reported favorably on the action of blisters at a meeting of the Society of Biology (Paris), December 22, 1906. In addition to the analgesic and diuretic effects of the blister there is another effect which, in their opinion, deserves special mention—the stimulation, the spur, which a blister gives to phagocytosis. The increase in the white blood cells reaches many thousands and may last for several days. It produces a polynucleosis, with eosinophilia. The blister is particularly indicated when leucocytosis is weak or moderate. The blister may also throw some light on the prognosis of a case. Absence of a leucocytic reaction indicates, in general, a grave attack; a marked and persistent leucocytic reaction is, on the contrary, an excellent prognostic.

Influence of Local Anesthesia on the Pain Consecutive to Injections of Soluble Salts of Mercury.—Dr. P. Salmon stated at a meeting of the Society of Biology (Paris, December 29, 1906) that, as was well known, pain was a formidable objection to the employment of mercurial treatment, by subcutaneous or intra-muscular injections. The advent of pain may be retarded, or sometimes even prevented, if cocaine or stovaine is injected first. These alkaloids are precipitated and rendered inert by mercurial salts. To get a favorable result, therefore, it is necessary to make the two injections, anesthetic and specific, separately. The two injections should be made at different depths.

A Quebec By-law Against Spitting.—The following by-law against spitting in public places came into force in Quebec, October 28th, 1906: "Whosoever shall spit upon the sidewalks of streets, roads and public places, or on the floor of any public building or vehicle, or on the deck of any public boat, shall be liable to a fine not exceeding five dollars for the first offence, and to a fine not exceeding ten dollars for every subsequent offence." We notice that there is no provision in this by-law against anyone expectorating into the street gutters. Total inhibition of spitting in public places is excellent in theory, but difficult in practice.

Toxic Neuritis Caused by Phosphite of Creosote.—Toxic neuritis, caused by poisoning, has been traced to alcohol, arsenic, lead and mercury, some of the most useful drugs mentioned in the Pharmacopeia. Dr. Osler says he has seen a case of neuritis "which followed the use of two grains of the sulphocarbolate of zinc taken daily for three years. Tea, coffee and tobacco are mentioned as rare causes." Judging from the extensive use of the agents referred to in the last remark by Dr. Osler, one would surmise that billions of the present generation of the human race are subject to, or likely to be sufferers from, neuritis. The toxic materials absorbed into the blood are said to produce the inflammation of nerve tissues, known as neuritis. How the toxins do it is not clear; but neither, for that matter, is it clear how toxins produce uremic convulsions. If the eliminating power of the kindeys is intact, uremia will not appear, even though a vast amount of toxic material be

circulating in the blood. May it not be also true that if the eliminating functions of the skin, kidneys and intestines be active, neuritis will not appear in a patient who may have some medicinal or alimentary toxins circulating in his blood? In a learned paper read before the International Society of Tuberculosis, November 6, 1906, Dr. Bertheim, Editor of the International Review of Tuberculosis, states that in his opinion phosphate of creosote, which usually yields excellent therapeutic results in tuberculosis, is often followed by lengthy and painful attacks of polyneuritis of toxic origin. This result has not been observed after the use of the phosphite of creosote.

Elimination in the Treatment of Tuberculosis.—In a paper entitled "The Common Sense Treatment of Tuberculosis," by Dr. T. W. Williams, published in Merck's Archives, January, 1907, the following appears: "When we give our malefern to kill a tapeworm, we follow it with purgatives to expel the worm from the body and tonics and restoratives to build up. Before giving the vermifuge we restrict the patient's diet and thus reduce the amount of pabulum accessible to the parasite and increase the proportion of the toxin in its food. In tuberculosis we aim to do the same thing. By restricting the diet, the blood becomes highly charged, proportionately, with the germicide (creosote). After killing whole colonies of microbes we must get rid of their remains. The white blood corpuscles are increased in number and appropriate as food the bacilli tuberculosis, as they do other less vindictive bacteria. Still those processes leave some residuum and 'physiological ash,' which we must eliminate. Enemas are preferable to purgatives." Dr. Williams enlarges on the good effects of the enema, which cleanses, empties and disinfects the colon, making room for the descent of the contents of the small intestines, thus preventing fermentation and autoinfection, while promoting the digestion and assimilation of food. The enema, at a temperature of 105 deg. F. should be administered on first rising in the morning, or after breakfast. In view of the enfeebled circulation and digestion of tubercular patients, and the added fact that medicaments, such as arsenic and creosote, are given them for long periods of time, elimination is certainly requisite in cases of tuberculosis. Daily elimination for evacuative purposes might, if deemed proper, be followed by an enema

of an emulsion of phosphite of creosote, given in tepid milk. This method of administering creosote to a tubercular patient is favored by Dr. Bertheim and certainly appears to have much to recommend it. J. J. C.

PERSONAL.

Dr. Lowry begs to announce to the profession that he has opened up consultation rooms at No. 2 College Street, and will make a specialty of ophthalmology.

Obituary

DEATH OF SIR WILLIAM HINGSTON.

Sir William Hingston, one of Canada's most distinguished physicians and philanthropists, died suddenly on Feb. 19th, at his home on Sherbrooke Street, Montreal.

The news of the passing away of this familiar figure spread rapidly, and on all sides could be heard expressions of grief. Despite Sir William's advanced age, his erect bearing, his active walk, his continual freshness, led those who knew him to think of him ever as younger than he was. Although taken slightly ill after dinner on the previous Sunday, death was by no means considered near.

The day before his death Sir William was up and about as usual, and lunched with a party of friends at the Mount Royal Club in the middle of the day. It was noticed that, although he endeavored to retain his usual pleasant demeanor during the meal, there was something amiss. He did not complain of any illness or pain, but seemed to find it hard to keep awake. After luncheon, in the smoking room, he dozed off, and it was not until some time had passed that his friends realized that his breathing was heavy and abnormal. Efforts were made to arouse him, but without avail. He seemed to have dropped off in a quiet trance.

Medical aid was at once summoned, and he was conveyed to his home, where his son, Dr. Donald Hingston, and several other physicians did all in their power to revive consciousness. Sir William still continued to sleep peacefully, however, and it was not until early next morning that any fears were entertained as to what the ultimate outcome would be. Acute indigestion is ascribed as the cause of his death.

Sir William Hingston was the son of the late Lieut.-Colonel Hingston, formerly in her Majesty's 100th Regiment. He was born near Huntingdon, January 29th, 1829, and was educated at the Montreal College, entering McGill University and taking courses in arts and medicine. He completed his university career at Edinburgh, where he received his diploma as surgeon. He returned to Montreal, and in 1853 began the practice of his profession, a practice which extended so rapidly that in a few years the name of Dr. Hingston was a household word throughout the city. In March, 1875, he married a daughter of the late Hon.

D. A. Macdonald, formerly Postmaster-General and Lieut.-Governor of Ontario.

He was formerly President of the City Passenger Railway Company, and had long been a director, and at the time of his death was President of the Montreal City and District Savings Bank. He was an unsuccessful candidate for Montreal Centre in the bye-election of 1895, for the Commons, being defeated by Hon. James McShane. In the following year he was called to the Senate of Canada, and was appointed a member of the Ottawa Improvement Commission in 1902. In politics he was a Conservative, and in religion a Roman Catholic.

Sir William Hingston is survived by his wife, Lady Hingston, one daughter, Miss Eileen, and four sons. The eldest son is at present studying for the priesthood; the second is Dr. Donald Hingston of the Hotel Dieu, while the third, Mr. Basil, is with the firm of W. P. O'Brien & Company, stock brokers. The youngest is a student at Laval.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

To the Editor of the Canadian Journal of Medicine and Surgery:

My Dear Sir,—I regret that I have been unable to answer yours of the 25th January ere this, but will now try to give you a fair idea of what we have outlined as the work of the proposed Hygienic Institute.

First, I might say that it is only along the line of advanced medical instruction or education that the Government would in any way consider our request.

Our aim in establishing the Hygienic Institute here is to provide three fully-equipped laboratories in Chemistry, Physics and Bacteriology, with several small research rooms in connection with each. In the building there would, of course, be a lecture-room, capable of accommodating 100 or 150 people, hygienic and other museums, library, etc.

The Government grant towards the erection and maintenance of the institution is given in response to signed requisitions—in number four hundred or more—from nearly every medical practitioner in and west of Guelph, and the majority of the Boards of Health in this western district, and more especially due to the energetic and persistent pleading with the Premier and Cabinet of the Hon. A. Beck, our local member.

Our endeavor will be to have our Professor of Bacteriology, etc., appointed the examiner for the Provincial Board of Health in the west, as Dr. Connell of Kingston is for the eastern part of Ontario.

The work of the institute will be the examination of water, milk, food products, patent medicines, bacteriological and pathological specimens and general research work as to the diseases of men and animals.

The Western University at present has not the power to confer the degree of D.P.H., but if the institute is a success in the training of health officers, inspectors, etc., and there is a demand for the degree, I have no doubt that our senate will so amend its charter, with the consent of the Legislature, that the desired degree may be given.

Thanking you for your intended kindness in referring to the matter in your already very full columns, I am,

Sincerely yours,

W. M. English.

688 Dundas Street, London, February 6, 1907.

News of the Month.

CANADIAN MEDICAL ASSOCIATION, MONTREAL, SEPTEMBER 11th, 12th, 13th, 1907.

WORKING COMMITTEES.

Medicine.—Drs. H. B. Cushing, F. G. Finley, Gordon, H. A. Lefleur, Martin, Morrow, Nicholl, Peters, Richer.

Surgery.—Drs. Armstrong, Archibald, Bell, Barlow, Bazin, Elder, England, Garrow, Monod, Forbes, von Eberts.

Dermatology.—Drs. Jack, Shepherd.

State Medicine.—Drs. McTaggart, Louis Laberge, Starkey.

Laboratory Workers.—Drs. Keenan, Yates, Duval, Adami, Klotz, Bruere.

Pediatrics.—Drs. Blackador, Gordon Campbell, Fry, F. P. Shaw, Francis.

Gynecology.—Drs. Chipman, Gardner, Lockhart, Lapthorn, Smith.

Museum.—Drs. Adami, Maud Abbott.

Eye.—Drs. Byers, J. J. Gardner, Stirling, McKee, Tooke.

Laryngological.—Drs. H. S. Birkett, R. Craig, Jamieson, H. D. Hamilton.

Neurological.—Drs. Shirres, Colin Russell.

Obstetrics.—Drs. Cameron, Evans, Reddy, Little.

THE ONTARIO MEDICAL ASSOCIATION.

THE Committee on Papers announces that the series of papers to be read at the next meeting, dealing with the Relation of the Profession and the Public, will be read under the following titles:

1. "The Medico-Legal Aspects," by Dr. G. Silverthorn. This paper will take up the question of the appointment and remuneration of coroners; the selection of expert pathologists for autopsy work and proper remuneration; the present undesirable method of retaining experts in legal cases; a discussion of the present irresponsibility for the payment of fees in legal cases and a comparison of all fees with those of other countries.

2. "The Public Health Aspects," by Dr. J. W. S. McCullough. The need of the appointment of county health officers: compulsory vaccination: remuneration for the registration of births, deaths and infectious diseases, and that attendance upon the poor should be remunerated by the municipality: the organization of the profession, and how to deal with the peripatetic dead-beat.

3. "The Ideals of Asylum Work for Ontario," by Dr. C. K. Clarke.

4. "The Infection of Drinking Water," by Dr. J. A. Amyot. The following have promised with some reservation at this early date to discuss these papers: Drs. C. A. Hodgetts, R. Raikes, W. R. Hall will take up certain portions of Dr. McCullough's paper; Drs. Beemer, Burgess, of Montreal, J. Russell and W. N. Barnhart, Dr. C. K. Clarke's, and Drs. Starkey, of Montreal, and W. T. Connell, Dr. Amyot's paper.

The Committee on Arrangements wishes to announce that there will be a smoking concert on the first evening and on the second a dinner at one of the large hotels, at which a distinguished guest will speak, whose name will be announced later.

SOCIETE INTERNATIONALE DE LA TUBERCULOSE.

Meeting of the 6th of November, under the Presidency of Professor Lancereaux.

The Compulsory Notification of Tuberculosis.

Dr. Samuel Bernheim and Louis Dieupart. The authors, after having referred to the conclusions of the recent International Conference on Tuberculosis (at The Hague in October, 1906), and the favorable report of the committee of the Academy of Medicine (June, 1906), declare: That prophylaxy can become real and efficacious unless the compulsory notification of tuberculosis is legally enforced. In a struggle with such a formidable enemy no half measures will avail.

The compulsory notification of tuberculosis could be made without any shock to humanity. Certain countries have adopted it and find the advantage of it. We must await the day when the public in all countries will be sufficiently educated to accept this excellent measure of protection unhesitatingly.

Compulsory notification, of course, involves, *ipso facto*, compulsory disinfection.

According to Messrs. Bernheim and Dieupart compulsory notification during the lifetime of the patients should only apply to

manifest tuberculosis in which the patient expectorates the bacilli. It appears to them needless to complicate the matter by including all forms of osseous, ganglionary, cutaneous and other forms, which rarely present any danger.

The Phospho-Creosote Treatment of Tuberculosis.

Dr. Samuel Bernheim. Demineralization is a characteristic of the tuberculous subject. The soil is poor in phosphates and chlorides. This tuberculous soil is a hypo-acid and a hyper-comburant. The best treatment consists in transforming this soil and in assimilating it, as far as possible, to the arthritic formula. The hygieno-dietetic treatment does this admirably.

But this treatment is peculiarly facilitated, and its duration may even be abbreviated, if accompanied by certain medical treatment, especially phospho-creosote therapeutics. There is a polyether of creosote which facilitates this transformation of the tuberculous hypo-acid soil into arthritic hypetacid soil, and this is phosphite of creosote or "phosphotal."

This salt acts both by its phosphorous acid in removing the humoral acidity, by its phosphorous element in combating the dephosphorization of the tuberculous soil and in replacing it by an arthritic soil, and finally, by its creosote, an acidifying medicament which liquefies the expectoration and especially influences the bacteria associated with the bacillus, and which will decrease and often disappear.

The author has treated a large number of tuberculous subjects with phosphotal, and he particularly notes 97 cases, most of which have derived benefit from this treatment. Phosphotal, which is easily tolerated, is administered *per os*, by subcutaneous injections or by the rectum, in daily doses of 0.50 centigrammes to 2 grammes. This treatment may be continued for a very long period without the slightest inconvenience. An interval of eight days should be allowed after administering phosphotal for three weeks.

Army Medical Corps.—The Department of Militia and Defence of Canada is authorized to grant commissions to twenty-five Nursing Sisters in the A. M. C., to be employed when necessary. There are at present seventeen. Two of the most recent appointments are to the Halifax Garrison Hospital—Miss Georgina Pope, Royal Red Cross, appointed in August, 1906, and Miss Margaret McDonald, appointed in November, 1906. These two sisters both served in South Africa with distinction, and are entitled to the rank, pay and allowances of a lieutenant.

ABSTRACTS.

Cancer-Infected Cages for Rats and Mice.—H. R. Gaylord and G. H. A. Clowes, Buffalo, N.Y. (*Journal A. M. A.*, January 5), give the history of the endemic occurrence of sarcoma in rats in an infected cage in the New York State Cancer Laboratory. Three years previously the cage had been used for the keeping of rats inoculated with sarcoma. They also give an account of another infected cage in which, in the course of three years, over sixty cases of carcinomatous tumors have occurred in white mice. The frequent changes of location of the cage and of its occupants in at least one instance without interrupting the occurrence of tumors, seem to leave no doubt that the infection is in the cage. The authors consider it the most striking example of cage infection that has yet been recorded. These observations, they remark, indicate that both sarcoma in rats and carcinoma of the breast in mice (all the cases in the mice seemed to occur in females), must be looked on as contagious, and, taken in conjunction with other like observations on record, should, they think, lead us to give more consideration of the possibility of the contagion or local infection of malignant growths in the human species. The article is fully illustrated.

The Treatment of Pleurisy with Effusion.—F. Forchheimmer Cincinnati (*Journal A. M. A.*, January 5), finds that the chief causes of the prevention of the absorption of pleuritic effusions are the results of inflammatory processes deposited on the endothelial layer, and, still more effective, the compression of the lung by the pleuritic effusion, and the greater this becomes, the less the chance of spontaneous absorption. For the first condition, we must attempt to reduce the inflammation of the pleura itself, and whether this can be done with any amount of certainty is a question. Ice-bags, local hydrotherapy, rest in bed, strappings and counter-irritation, salicylates, etc., may be used, but at best the methods are imperfect, though he would not like to be without them. For removing the effused fluid, the general treatment is based on the modification of the blood structure so as to favor its absorption, and the means usually recommended are: The use of cathartics, diuretics, diaphoretics, diet, superalimentation (in reduced subjects) or withholding of liquids and the milk cure. Except superalimentation, diuretics and the milk cure, these are depressing measures, and Forchheimer holds that save in a very few exceptional cases, general methods are unnecessary in acute cases, as local treatment is much more effective. He condemns counter-irritation as inaccurate, inefficient and harmful. He sees no contraindications to paracentesis, and thinks that every one will agree that when a

large effusion develops rapidly it should be withdrawn. He has always used the aspirator, and, in addition to complete asepsis, considers the following precautions necessary: The negative pressure within the aspirator should not be too great, otherwise the lung will be too suddenly expanded, with the well-known unpleasant consequences. It is rarely necessary to increase the pressure within the aspirator; not much suction is required. The second precaution is not to withdraw too much fluid at one time, but no fixed rule can be given as to the amount to be taken. Enough to relieve the symptoms is all that is required. It is usually easy enough to tell when another aspiration is needed. Another precaution to be taken is to keep the patient in as nearly a recumbent position as possible at the time, so as to avoid the bad effect of too sudden change in the circulation, which would be less in the recumbent position than in any other. The patient should be carefully watched during the operation, and if he coughs violently or spasmodically, suffers great pain or is faint, the aspiration should be interrupted, to be tried again when the symptoms have disappeared. If they then reappear, the needle should be withdrawn and the patient put to bed. After removal of the fluid it is well to keep the patient in bed and under observation for a short time. In all cases respiratory gymnastics should be advised. In chronic serous effusion the conditions are different, and there are a few cases in which repeated removal of the fluid does not bring recovery. The future therapeutic development of this subject, Forchheimer says, lies in the direction of surgery. With empyema the principles of treatment are still different; very few cases can be cured by aspiration. The condition is practically one of abscess, and the one essential indication is its opening and drainage —the earlier the better. While rib resection is the rule, with an early diagnosis, he would make an exception in cases in which the thorax is sufficiently elastic, as in children under two years of age, to warrant the risk of its contracting sufficiently to collapse the abscess.

Adrenalin Catheterization in Prostatic Cases.—A. E. Prince Springfield, Ill. (*Journal A. M. A.*, January 5), reports three cases in which he relieved the difficulty of catheterization, otherwise insuperable, by inserting the contents of an ordinary pipette filled with equal parts of an 0.1 per cent. solution of adrenalin and a 4 per cent. solution of cocaine into the catheter and allowing it to gravitate to the tip. Then he inserted the end of the pipette into the upper end of the catheter, closing it and preventing the escape of the fluid, and introduced the catheter as far as it could be done without discomfort. The solution was then injected from the catheter by squeezing the bulb of the pipette. After waiting a short time the instrument passed painlessly into the bladder.

The Physician's Library.

BOOK REVIEWS.

The Bacteriological Examination of Water Supplies. By William G. Savage, B.Sc., M.D. (Lond.), D.P.H. Medical Officer of Health and Public Analyst, Colchester; late Lecturer on Bacteriology, University College, Cardiff; Bacteriologist to the Cardiff and County Public Health Laboratory; Assistant to the Professor of Pathology, with charge of the Bacteriological Department, University College, London. London: H. K. Lewis, 136 Gower Street, W.C. 1906.

This is a very timely treatise upon a subject with which many practitioners are but slightly acquainted. The author has been a diligent student of water analyses by bacteriological methods, and the book he has written on that subject enables the reader, whether a bacteriologist or not, to gain a good grasp of the subject.

Physicians or hygienists desirous of acquiring authoritative data on the examination of water for the typhoid bacillus should read the seventeenth chapter of the book. Some idea of the labor involved in the preparation of this work may be gathered from the fact that the recent bibliography, printed at the back of the book, covers thirteen pages. J. J. C.

Atlas and Text-book of Human Anatomy. By Dr. Johannes Sobatta, Professor of Anatomy in the University of Würzburg. Edited, with additions by J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy in the University of Michigan. Vol. II.—The Viscera, including the Heart, with 214 illustrations, mostly in colors. Philadelphia and London: W. B. Saunders Company. 1906. Canadian Agents, J. A. Carveth & Co.

This is a quarto volume of 194 pages, containing 214 illustrations, mostly in colors; published in cloth at $6.00 and half morocco at $7.00. This is the second volume; the entire work when completed will consist of three volumes. The first volume dealt with the bones, ligaments, joints and muscles. The contents of this second volume are enumerated above.

A large number of atlases and text-books on human anatomy have appeared recently, but it is safe to say that none of them sur-

pass the standard of excellence which is maintained thus far in the work at present under review. The illustrations are excellent both as works of art and in accuracy of detail. The descriptive letterpress is full and clear and constitutes a reliable and useful guide to a knowledge of human anatomy. One has no hesitation in recommending this work to students and practitioners, as we believe it to be in many respects the best work of its kind that has appeared in the English language.

A Manual of Normal Histology and Organography. By Charles Hill, Ph.D., M.D., Assistant Professor of Histology and Embryology, Northwestern University Medical School, Chicago. 12mo volume of 463 pages, with 312 illustrations. Philadelphia and London: W. B. Saunders Company. 1906. Flexible leather, $2.00 net. Canadian Agents, J. A. Carveth & Co., Toronto, Ont.

This work is designed for students' use under the guidance of a demonstrator. The book is well arranged, the descriptions are easy to follow and the illustrations are all one could desire. The closing chapter is devoted to stains and laboratory methods. This will prove a first-class work for either the student or practitioner who requires a review of the subject. W. J. W.

Syllabus of Lectures on Embryology. An Introduction to the Study of Obstetrics and Gynecology. By Walter Porter Manton, M.D. Pages, 136. Philadelphia: F. A. Davis Co., publishers.

This little volume is a dandy. It contains not a useless word, no long, unnecessary explanations or theories, and yet it does not read like a quiz-compend. Each organ is taken up in turn, its anatomy, physiology, embryology are briefly stated. A small section on technique is appended. The work would be especially valuable for physicians contemplating a post-graduate course.

E. A. M.

A Text-book upon the Pathogenic Bacteria, for Students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Philadelphia Hospital and to the Medico-Chirurgical Hospital, Philadelphia; Fellow of the College of Physicians of Philadelphia, etc. Fifth edition. Philadelphia and London: W. B. Saunders Company, Publishers.

The new edition of this excellent work will no doubt retain the high position of the former ones.

The pathogenic bacteria are considered in such a thorough manner that all who read the work will be greatly benefited. Bacteriology is such a progressive subject that it seems almost impossible for physicians to keep abreast with the continual advances made, yet this work deals so fully with the very latest ideas that it well deserves a place in the doctor's library.

The system of study of each organism is taken up in a routine way that not only simplifies the description, but impresses thoroughly the main points upon the reader.

The chapter on syphilis lays stress on the recent observations on the finding of the spiro-chaeta pallida (Schaudinn), thus illustrating well the up-to-date character of the work.

There are many beautiful illustrations throughout the book, which are of much assistance to all students of bacteriolgy.

D. K. S.

A Text-book of Pathology. By Alfred Stengel, M.D., Professor of Clinical Medicine, University of Pennsylvania; Physician to the Pennsylvania University and the Philadelphia hospitals. With 399 illustrations in the text, many of them in colors, and 7 full-page chromo lithographic plates. Fifth edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1906.

There is evidently a great demand for this popular text-book, as the editions rapidly succeed each other, thus keeping it well abreast of the times. We find this edition to be somewhat larger than the previous ones, but still retaining the characteristics of a text-book. The three important chapters, "Inflammation," "Immunity" and "Animal Parasites," have been extensively revised and augmented. Under the heading of "Immunity" such theories as the alexin, opsonin, aggressin and bacteriolytic are fully explained.

The work as a text-book for students and practitioners should continue to hold the enviable reputation it has already won.

W. H. P.

Studies in the Psychology of Sex. Erotic Symbolism, the Mechanism of Detumescence, the Psychic State of Pregnancy. By Havelock Ellis. Pages, 285. Extra cloth, $2.00, net. Sold only by subscription to physicians, lawyers and scientists. Philadelphia: F. A. Davis Co., publishers, 1914-16 Cherry Street.

This volume has already met with much harsh criticism. It is only fair to say, however, that the author has gone to a good deal of trouble collecting and arranging material, and presents a distasteful subject unobscured by technical terms and unfettered by scientific experiments. If one is interested in a study of these

phenomena or wishes to investigate the subject for its own sake, the book will yield an abundance of illustration. Its practical value to the practicing physician is nil. The psychologist might find ample field for investigation in some of the extraordinary sexual histories cited, but it would never be safe to trust him with the book, as his morals would be forever ruined.

E. A. M.

Minor Maladies and Their Treatment. By Leonard Williams, M.D., M.R.C.P., Physician to the French Hospital; Assistant Physician to the Metropolitan Hospital; late Assistant Physician to the German Hospital, and Hon. Medical Officer to the Sidmouth Cottage Hospital. Paris, London and Madrid. London: Bailliere, Tindall & Cox., 8 Henrietta Street, Covent Garden. 1906. Toronto: J. A. Carveth & Co., Limited, 34 Yonge Street, Toronto.

Much of the matter contained in this volume was embodied in some lectures delivered at the Medical Graduates College and Polyclinic, and has already appeared in the *Clinical Journal* and elsewhere. It is hardly to be found in the average text-book.

The book takes the place of our old preceptor. It describes the management and treatment of a lot of ailments that are overlooked by the medical student until after he is qualified, when he suddenly finds to his cost that the more serious conditions do not occur every day, but that the conditions that he has to treat have, in many cases, merely been mentioned, but never fully considered, in his text-books. It is full of the most valuable information, and should be on the shelves of every medical man, and will be read with much interest by old and young. The treatment laid down is scientific, and is accompanied by a number of very valuable common-sense suggestions. A. J. J.

The Harvey Lectures, delivered under the auspices of the Harvey Society of New York. 1905-06. Philadelphia and London: J. P. Lippincott Company. 1906.

The book contains 337 pages, and reproduces the following essays: "The Theory of Narcosis," by Prof. Hans Meyer, University of Vienna; "Modern Problems or Metabolism," by Prof. Carl von Noorden, University of Vienna; "On Trypanosomes," by Prof. Frederick G. Novy, University of Michigan; "Autolysis," by Dr. P. A. Levene, Rockefeller Institute for Medical Research; "A Critical Study of Serum Therapy," by Prof. W. H. Park, University and Bellevue Hospital Medical College; "The Neurons," by Prof. Lewellys F. Barker, Johns Hopkins University; "Fatigue," by Prof. Frederick S. Lee, Columbia University; "The Formation of Uric Acid," by Prof. Lafayette

B. Mendel, Yale University; "The Extent and Limitations of the Power to Regenerate in Man and other Vertebrates," by Prof. T. H. Morgan, Columbia University; "On the Nature and Causes of Old Age," by Prof. Charles S. Minot, Harvard University; "Modern Views Regarding Placentation," by Prof. J. Clarence Webster, University of Chicago; "Some Phases of Tuberculosis," by Prof. Theobald Smith, Harvard University; "The Cause of the Heart Beat," by Prof. W. H. Howell, Johns Hopkins University.

This collection contains a series of interesting monographs by well-known authors and authorities on most important subjects. It is not necessary to do more than enumerate the subjects dealt with and the names of the different contributors. It is undoubtedly a volume replete with valuable and instructive information on the various subjects presented by the individual writers.

Progressive Medicine, Vol. IV., December, 1906. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 349 pages, with 29 engravings. Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00, carriage paid to any address. Philadelphia and New York: Lea Brothers & Co., publishers.

In the first section Dr. J. Dutton Steele deals with diseases of the digestive tract and allied organs. He reviews the literature on such interesting topics as occult blood in the diagnosis of gastric ulcer and in the diagnosis of cancer, and radiography in the diagnosis of intestinal disease. He also writes an interesting discussion on the etiology and treatment of chronic constipation. Dr. Wm. T. Belfield, in the second section, deals with tuberculosis of the urinary organs, and other genito-urinary diseases. Under "Gonorrhea" he says that "Torrey has prepared a serum containing agglutins and precipitins for the gonococcus. His clinical observations indicate that this has no appreciable effect upon the urethral discharge, but causes marked improvement in the various metastases of the gonococcus comprised under the term gonorrheal rheumatism. Under "Diseases of the Kidneys" there is a valuable article on the treatment of nephritis. Dr. Joseph C. Bloodgood contributes, in the fourth section, one hundred pages on anesthetics, fractures, dislocations, amputations, surgery of the extremities, and orthopedics. Dr. H. R. M. Landis contributes over sixty pages to the last section, which deals with therapeutics. This is possibly the most interesting section

in the whole number. In regard to adrenalin, he says that the important questions of dosage and the after-effects on man are still unsettled. He cites a case where one drachm of the 1 to 1,000 adrenalin chloride solution was given every hour for four or five doses in a case of obstinate hemoptysis. Suggestions are also made regarding the use of alcohol, mercury, opium, urotropin, ergot and many other drugs. The December number is full of practical, useful articles, and is interesting from start to finish.

A. E.

Food and the Principles of Dietetics. By Robert Hutchinson, M.D. (Edin.), F.R.C.P., Assistant Physician to the London Hospital, and to the Hospital for Sick Children, Great Ormond Street; author of "Lectures on Diseases of Children," "Patent Foods and Patent Medicines," joint author of "Clinical Methods." Revised edition, with plates and diagrams. Pp. xx.-582. Cloth, $3 net. New York: William Wood & Company. 1906.

The chief changes to be found in the present edition are in the chapter dealing with the amount of food required in health and in the sections devoted to the dietetics of disease, but in every respect this standard work has been fully brought up to date. The various plates, tables and diagrams are a very prominent and valuable feature, and tell their stories most graphically. C. R. D.

A System of Clinical Medicine. Dealing with the Diagnosis, Prognosis and Treatment of Disease, for Students and Practitioners. By Thomas D. Savill, M.D. Lond. Vol. 2. "Certain General Disorders; Diseases of the Skin and the Nervous System." London: J. A. Churchill, 7 Great Marlborough Street. 1905.

In a book review, which appeared in the January, 1907, number of this journal, the first volume of Dr. Savill's work was noticed. In the second volume are chapters on General Debility, Pallor, and Emaciation; Symptoms referable to the Extremities; Symptoms referable to the Skin; Symptoms referable to the Nervous System; and finally, an epitome of clinical bacteriology and the examination of pathological fluids. The second volume is separately indexed.

Frequent reference to both volumes reveals new features corroborative of one's own observation in clinical medicine and of observations made by others. Some observers might object to the presence in Vol. 2 of the chapters devoted to diseases of the skin, but there is no good reason why the etiology, diagnosis and treatment of these diseases should not be given in a work devoted to clinical medicine. Dr. Savill's experience in the treatment of

skin diseases appears in minute things, as when he recommends 20-grain doses of calcium chloride for urticaria. The chapters on diseases of the nervous system, including diseases of the mind, are excellent. In fact, Dr. Savill's work is an encyclopedia medica. From a rather frequent reference to it, and some familiarity with works on the practice of medicine, we would say that Dr. Savill's book ought to be the most used and the most useful book in a physician's library. We cordially recommend it to physicians and senior students of medicine. J. J. C.

Abdominal Operations. By B. G. A. Moynihan, M.S. (London), F.R.C.S., Senior Assistant Surgeon at Leeds General Infirmary, England. Second revised edition, greatly enlarged. Octavo of 815 pages, with 305 original illustrations. Philadelphia and London: W. B. Saunders Company. 1906. Cloth, $7.00, net; half morocco, $8.00, net. Canadian agents: J. A. Carveth & Co., Toronto, Ont.

It seems but yesterday that the first edition of this work was before us, and yet one has but to glance through its pages to find much additional matter in both the text and the illustrations.

The whole chapter on "Preparations Adopted by Surgeons and Assistants," should be carefully read and digested by all modern surgeons, as well as by nurses responsible for operating-room technique.

The work does not include the surgery of such organs as the kidney and bladder, nor does it include any gynecological operations. It does include operations upon the stomach, the intestines, the liver, the gall-bladder and ducts, and the spleen and pancreas. As these were fully covered in a former review it is not necessary to go into them here, except to say that the whole work is thoroughly up-to-date. F. N. G. S.

The Technic of Operations upon the Intestines and Stomach. By Alfred H. Gould, M.D., Boston. Philadelphia: W. B. Saunders Company. Toronto: J. A. Carveth & Co.

If books for review were oftener of the type of the one before us the task of the reviewer would be a pleasant one.

Good original work, modestly presented and splendidly illustrated, with a generous recognition of what others have done and are doing along similar lines, are leading characteristics of Dr. Gould's volume.

The work starts out with a study of the pathology of repair in intestinal wounds, then suture materials, aids and methods are taken up and then, in proper sequence, all the operative procedures now most in favor in dealing with the stomach and intestines receive full and satisfactory consideration. No other work known

to the writer of this review goes quite so fully into the thousand and one details which make or mar success in intestinal surgery. In a general way it can perhaps be best compared with that admirable section on the surgery of the organs connected with the peritoneum to be found in Bryant's operative surgery, while in wealth, in beauty and in accuracy of illustration it is in a class with Kelly's operative gynecology.

Having come to the conclusion that to any surgeon doing abdominal work its value will be many times its published price, the purchase of Dr. Gould's book is unreservedly advised.

N. A. P.

Operative Gynecology. By Howard Kelly, A.B., M.D., LL.D., F.R.C.S. Edin.; Professor of Gynecology at Johns Hopkins University, etc. New York and London: D. Appleton & Co.

It is now ten years since the first edition of this work was presented to the medical profession. At that time great praise was showered on the talented author for the workmanlike manner in which the book was compiled. The second edition is of much greater value—enlarged, containing many more illustrations, and much more subject-matter, while the increased experience gained through an enormous practice, hospital and private, and aided by skilled laboratory and clinical assistants, has enabled Dr. Kelly to present a work as near perfect as human hands and brain can produce. The additions of greatest interest deal with the anatomy of the peritoneum, with complete laceration and relaxed vaginal outlet: a very much improved and perfected article on the urethra, bladder and ureters and kidneys. He also has taken into consideration the general practitioner, and for his benefit has added an entirely new chapter on local and palliative treatments, as well as chapters on displacements and pessaries and menstruation and its anomalies. Cancer of the uterus is also entirely rewritten and embellished with fifty-six new illustrations on this subject. Gynecological diseases in early childhood is also a new chapter of extreme interest.

Nearly the entire work on bacteriology has been rewritten and greatly altered, for much has been added to this subject in the past ten years. From the first chapters on "Instruments," "How to Examine a Patient," "Postures," "History-taking," etc., to the last one on "Intestinal Complications," there is no let up or slackness in one single sentence or line. Work, and hard work, laborious care to make everything clear and concise, backed up by finely magnificent plates, mostly photographs taken immediately from the subject, makes this work unique.

The publisher should also be congratulated on the production of so splendidly finished a work. It is divided into two volumes, each six hundred and fifty pages, and contains no less than eleven

beautifully colored plates, and over seven hundred original illustrations. No practitioner who does any work in the field of gynecology can afford to be without this book. It is certainly *par excellence* the best work of reference published, and, moreover, it is more than that, it is a work that any student having time at his disposal will find the easiest and simplest exposition of the subject yet published. A. B.

A Text-Book of Elementary Analytical Chemistry, Qualitative and Volumetric. By JOHN H. LONG, M.S., Sc.D., Professor of Chemistry in the Northwestern University Medical School. Third edition, revised and enlarged. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1906. Price, $1.25.

As in former editions, the first part is devoted to qualitative analysis, and the second part to volumetric analysis. The principal changes in this edition consist in the addition of a chapter on reactions in solutions, and a number of simplifications in qualitative processes. In the second part several paragraphs have been added on the use of indicators, and a number of new processes have been added. This is a handy and convenient text-book. A. E.

A Text-Book of Diseases of Women. By J. CLARENCE WEBSTER, M.D. (Edin.), F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynecology in Rush Medical College, in affiliation with the University of Chicago. Large octavo of 712 pages, with 372 text-illustrations and 10 colored plates. Philadelphia and London: W. B. Saunders Company. 1907. Canadian agents: J. A. Carveth & Co., Ltd., Toronto. Cloth, $7.00, net; half morocco, $8.00, net.

Dr. J. Clarence Webster has for a period of some years been looked upon as an authority on diseases of women. For this reason, if for no other, his text-book will be welcomed by many as a book of reference and no doubt a source of enlightenment on a subject which to a great many practitioners frequently proves a stumbling block. There is little doubt that, during the past decade or more, the tendency in the treatment of many diseases of women has been narrowed down too much to a surgical procedure, so that, for this reason, the practice of gynecology has almost become ultra specialized. As the author of this book himself says: "Too strong a protest cannot be urged against the concentration of attention on the local pelvic condition without regard to wider physical and psychical relationships." Dr. Webster's book consists of twenty-four chapters, covering in all about 700

pages. After discussing in a somewhat stereotyped manner the anatomy of the female pelvis, puberty and menstruation, he takes up such subjects as: "The Genital Tract in Relation to Micro-organisms," "Surgical Technic," "Affections of Peritoneum and Cellular Tissue," "Injuries and Displacements of the Pelvic Floor," "Affections of the Vulva," "Affections of the Vagina and Hymen," "Affections of the Ovaries and Fallopian Tubes," "Malformations of the Uterus," "Displacements," "Ectopic Gestation," and "Sterility in the Female."

One of the most interesting chapters is the one entitled, "Neuroses in Relation to Pelvic Diseases in Women." In this the author discusses hysteria and neurasthenia in women. In referring to the relation of pelvic disease to insanity, Dr. Webster says: "This relation is not definitely established. Insane women undoubtedly have pelvic disease just as sane women have; but whether there is any connection between them of the nature of cause and effect it is impossible to say. It has been proposed by some to remove the appendages in cases where abnormal sexual aberrations are part of the insane manifestations, but there is no rational ground for such a procedure." W. A. Y.

Surgical Suggestions. Practical Brevities in Diagnosis and Treatment. By Walter M. Brickner, M.D., Chief of Surgical Department Mount Sinai Hospital Dispensary; Editor-in-Chief *American Journal of Surgery*, New York; and Eli Moschcowitz, M.D., Assistant Physician Mount Sinai Hospital Dispensary; Editorial Associate *American Journal of Surgery*, New York. New York: Surgery Publishing Company, 92 William Street. 1906.

"Surgical Suggestions," as the authors state, is a collection of the valuable hints and bits of wisdom published during the past year, in successive issues of the *American Journal of Surgery.*

The "Suggestions" are arranged in convenient form and well indexed, so that one may easily refer to them. This is a little work of 58 pages, full of surgical hints gained by experience and calculated to save one from many pitfalls. It will well repay a careful reading. W. J. W.

The Western Canada Medical Journal. We have recently received the first two issues of *The Western Canada Medical Journal,* published by Dr. George O. Hughes, of Winnipeg. We don't hesitate to congratulate our confrere upon his initial numbers. They are clean, crisp, readable, and, from a mechanical standpoint, excellent. There is no reason why the new journal should not be a success, and, though its successful establishment means a whole lot of work on the part of a few, yet we earnestly trust that, editorially and financially, it will be a winner.

American Practice of Surgery. A Complete System of the Science and Art of Surgery, by representative surgeons of the United States and Canada. Editors, Joseph D. Bryant, M.D., and Albert H. Buck, M.D., of New York City. Complete in eight volumes; profusely illustrated. Volume II. New York: Wm. Wood & Co. 1907.

We think that we are not far wrong when we say that seldom has any publishing house in America undertaken so great a task or gone to such expense as have Messrs. Wm. Wood & Co. of New York in getting out such an extensive and comprehensive system as "The American Practice of Surgery." On a par with this work we would place, for instance, "Twentieth Century Practice," which the same house published but ten years ago. Vol. II. of "American Practice of Surgery" has just come to hand, and it is even better than its predecessor.

From a mechanical standpoint, the book is a worthy example of the highest in the printer's art. The paper could not be excelled and the half-tone illustrations are among the best we have ever seen. It takes but a moment for the reader to realize what a large sum of money any firm must needs invest in publishing such a work, but, judging from the real scientific worth of Drs. Bryant and Buck's System, there is no question as to those who have invested their money getting it back, we trust, fourfold.

Among the contributors to Volume II. are: Dr. W. C. Borden, Dr. C. R. Darnall, both of Washington, D.C.; Dr. C. N. Dowd and Dr. V. P. Gibney, of New York City; Dr. A. F. Jonas, of Omaha; Dr. E. L. Keyes, of New York; Dr. J. F. Leys, of Norfolk, Va.; Dr. W. McDowell Masten, of Mobile; Dr. D. W. Montgomery, of San Francisco; Dr. P. M. Pilcher, of Brooklyn, N.Y.; Dr. J. Clark Stewart, of Minneapolis; Dr. B. T. Tilton, of New York; Dr. DeForest Willard and Dr. A. C. Wood, of Philadelphia.

Vol. II. consists of Parts VI. to X., inclusive, devoted to the following subjects: Part VI., Diseases which belong in varying degrees to the domain of surgery and which are observed in certain parts of the United States and its dependencies and in Canada; Part VII., General survey of tuberculosis and symptoms in their relations to surgical work; Part VIII., Surgical diseases of various widely distributed structures of the body; Part IX., Surgical diseases caused by intense heat and intense cold and by the electric current; and Part X., Simple and complicated wounds, including gunshot wounds. One of the best samples of color printing that we have seen for some time is Plate XVII., showing the potassium iodide eruption. Plate XIV., illustrating molluscum contagiosum, is very delicate and true to nature, as also that of biskra button (oriental boil, aleppo boil).

Perhaps the most interesting section is that by Dr. Benjamin T. Tilton, of New York City, on "Burns and the Effects of Electric Currents and Lightning." In discussing the treatment of burns, the author thinks well of the French method of treatment, with picric acid employed in the form of a solution, varying in strength from 1 in 100 to 1 in 50, applied through saturating sterilized gauze laid over the affected surface. He considers that by that method pain can be lessened more rapidly than by many other means. Where infection and inflammation have already occurred and the surrounding skin is red and painful, wet dressings are most efficient. In the case of extensive burns, the use of the continuous bath is often advisable.

Dr. Edward L. Keyes, of New York, contributes quite an elaborate section on "Syphilis from a Surgical Standpoint," which is well worth reading.

Dr. D. W. Montgomery, in writing on boils and the frequent attempt to abort them, says as follows: "All such attempts at aborting the furuncle are, however, quite likely to fail, and they are aside from the real aim of treatment, viz., materially to alter the physical condition of the patient."

In a word, we can honestly state that no medical man, be he a physician, surgeon or general practitioner, can invest the money to any better advantage or probably get better value than by ordering "American Practice of Surgery." W. A. Y.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; Jas. Stewart, M.D., Montreal; J. B. Murphy, Chicago; A. McPhedran, M.D., Toronto; Thos. M. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; Jas. G. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume IV., sixteenth series, 1906. Philadelphia and London: J. B. Lippincott Co. 1906. Canadian agent: Charles Roberts, Montreal.

After a careful glance through, and even partial perusal of, Vol. IV. of this series of "Clinics," we feel that we are safe in saying that it is the best yet gotten out by the Lippincott firm. No

one can complain that they do not get good value in purchasing "Clinics" four times a year, as the matter *is all original.*

We find that among the contributors to Vol. IV. appear such names as Drs. Howard Lilienthal, of Mount Sinai Hospital; W. A. N. Dorland, of Philadelphia; J. B. DeLee, of Chicago; S. Roger Morris, of Johns Hopkins; J. G. Ross, of Philadelphia; J. Edward Squire, of London, Eng., and David Wallace, of Edinburgh.

Those who subscribe for "Clinics" undoubtedly receive for their money the *quid pro quo.*

Half a Rogue. By Harold MacGrath, author of "The Man on the Box." Toronto: McLeod & Allen. Cloth, illustrated.

A breezy story of the life of a man as playwriter, journalist, politician, lover and friend; entertaining, every line of it, and just enough out of the "beaten paths" of story telling to have a charm all its own. W. A. Y.

Publishers' Department

Shredded Wheat, a Suitable Diet during Recovery.—Shredded Wheat does not pall on the appetite; on the contrary, it satisfies and leaves a desire for more. It is an article of diet suitable for all stages of sickness where food is permissible. Since the stomach does not become intolerant of shredded wheat even after a long period of subsisting on it, this product is well adapted as a staple article of diet in health. Its nourishing qualities put it in the front rank as a steady food agent, and it may be made a component part of each meal. The great tendency of modern white flour to constipate is constantly brought to the attention of the profession. The bowels need a stimulant to their walls. They need, in addition to this gentle stimulation, a food mass that can be grasped, as it were, by the bowels, and by its mechanical presence encourage peristalsis. In the manufacture of a finely ground flour the parts of the wheat berry that would form a stimulating mass and aid digestion and bowel motion are eliminated, and in consequence the bread-eating public suffers. This sacrifice of a health-giving property for the sake of a beautiful white flour is responsible, in a certain degree, for an impairment of the natural functions of the gastro-intestinal canal. This difficulty is entirely obviated by shredded wheat. It leaves a residue which is slightly irritating to the mucous coat of the bowel and by its presence encourages normal intestinal activity. Nothing in the food line is more palatable than shredded wheat or can be prepared in such a number of appetizing ways. (*Abstract.*)

GRAPENUTS—A PURE FOOD "ADJUVANT" OF WELL-KNOWN PRACTICAL VALUE TO THE DOCTOR.

Feeding the body is, after all, a very simple matter when the results desired are fully understood, and the sources of supply are known.

The two principal objects to be attained by consumption of food are the repair of tissue and the production of heat or energy. The proteids are absolutely necessary to the first-named function; the carbohydrates, fats *and* proteids to the second.

In the normal, active individual, there is little difficulty in the way of elaborating food material into new tissues and storing up with them potential energy for future use. The normal physiological processes of metabolism, constructive and destructive, accretive and eliminative, accomplish these ends without perceptible effort or opposition.

In the case of abnormal or perverted nutritive processes, however, the skill and knowledge of the trained physician is of supreme importance in order to bring about a restoration of metabolic equilibrium. Weak digestive organs must be rested and at the same time the nutrition of the patient must not be neglected, or the life-processes will inevitably cease.

In consideration of the above, it is highly advantageous if a single food preparation can be obtained that has the following qualifications:

1. *Partially* predigested, but not *entirely* so, in order that the digestive organs may have *some* work to do and thus gradually encourage a return to normal function.

2. Containing a desirable proportion of the necessary proteids, carbohydrates and organic mineral matters to supply the various requirements of a true food.

3. Be of such form as to be easily prepared and agreeable to the taste.

4. If possible require some mastication, as it is now well known that *fully insalivated* food is much more perfectly acted upon by the gastric, pancreatic and intestinal enzymes.

In the preparation of Grape-Nuts the two most valuable of all cereals, *wheat* and *barley*, are used. The barley is partially malted and in the combination of this flour with the whole wheat flour in presence of heat and moisture, about 50 per cent. of their starch is converted into dextrose. By the long baking (16 to 20 hours) Grape-Nuts is subjected to, the remaining starch granules are so completely broken up that they are promptly converted by the saliva into soluble carbohydrates. Thus, it is practically *all available* as a food.

In a wide range of intestinal troubles, Grape-Nuts has been found by many eminent authorities to be an ideal aliment as a *therapeutic adjuvant* of the greatest possible value. The weakest patient can extract repair and energy material from it, and in various combinations with milk or cream, added proteid and fat may be secured.

Even children, the aged, the convalescent, can absorb, and gain strength from Grape-Nuts. On account of its composition and the fact that it is practically all assimilable, Grape-Nuts is of special value where it is necessary to prescribe a small bulk at a time and yet desirable to increase nutrition as rapidly as possible.

Its small proportion of fat is of special value since fats are difficult to digest, and when required can be added in the form of that most easily digested fat—cream.

The Postum people are sending out a liberal box of samples to physicians, and are desirous that the profession should keep in mind that Grape-Nuts is the pioneer among prepared foods now on the market, and contains absolutely no "coloring matter" or "preservative" not contained in clean, selected wheat and barley. "The Door Unbolted," for the waiting-room table and analysis of Grape-Nuts, in addition to the samples mentioned, will be sent on request to the Postum Cereal Co., Ltd., Battle Creek, Michigan, U.S.A.

POSTUM—A WHOLESOME BEVERAGE OF PECULIAR VALUE TO PATIENTS WHERE COFFEE DISAGREES

It is often necessary to interdict the use of coffee and tea during certain stages, if not throughout the course, of treatment, in many cases.

The reason for this is, coffee and tea contain an alkaloid—caffeine—which has a therapeutic or toxic action of its own, in proportion to the amount ingested and the susceptibility of the individual.

Like all drugs that create a delusive sense of stimulation or temporary freedom from physiologically normal fatigue, caffeine tends to induce a call for more and more of this "delusion." This in the end produces the "coffee-habit," which has to be reckoned with by the wise physician, if he expects to accomplish successful therapeutic results.

The world-wide indulgence in the use of these drug-containing beverages and the fact that they do not produce immediate alarming toxic effects, as in the case of alcohol, opiates, etc., has doubt-

less caused many otherwise astute and clever physicians to pass the matter by. On the other hand, this is being carefully considered by an increasing number of leading members of the profession as it should be.

That coffee and tea *do* cause many ailments frequently attributed to other causes and so treated, is doubtless true. That such a procedure is at wide variance with scientific diagnosis and efficient therapeutics, is also true. It is obviously impossible to secure definite therapeutic results from one remedy while the patient is under the influence of another—as is the case of the habitual consumer of *caffeine,* disguised in the form of a "harmless" beverage.

Realizing the desirability of removing the opposing element from the therapeutic field of operation, the conscientious doctor will be glad to turn to a wholesome, agreeable beverage made from clean, select wheat in such a manner as to make the discontinuance of coffee or tea an easy possibility for his patients.

Postum is made in this way: Clean, perfect wheat-berries are parched by skilful operatives and ground to the fineness of ordinary coffee. The outer, or bran-coat, with its stores of organic mineral salts, combined with 10 per cent. of New Orleans molasses, is parched in separate ovens, ground, and the two parts of the wheat blended by a special formula which long experimenting has shown to be just right for securing the aroma that (when boiled properly) makes Postum a delicious beverage.

Containing absolutely nothing not contained in fine wheat, it is obviously not only *safe* but *wholesome.*

The Postum people are sending out a liberal box of samples (including vials containing the various ingredients of Postum in the several stages of its manufacture) to physicians on request. Their handsome booklet, *"The Door Unbolted,"* for the waiting-room table, also analysis of Postum, will be sent on application to the Postum Cereal Co., Ltd., Battle Creek, Michigan, U.S.A.

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Original Contributions.

ACUTE OR SPONTANEOUS HEMORRHAGES IN THE NEWLY-BORN.

BY HENRY T. MACHELL, M.D., TORONTO,

Associate Professor of Obstetrics and Pediatrics, University of Toronto; Physician to the Hospital for Sick Children and to the Infants' Home.

Two varieties of hemorrhage in newly-born babies are met with occasionally: 1st, traumatic, or accidental, due to external causes or injuries, such as forceps or long-continued pressure on the head in the pelvic canal; 2nd, spontaneous or acute hemorrhage, and not caused by any apparent injury during birth. The bleeding is, as far as can be seen, spontaneous or without cause.

It is only the latter hemorrhage to which I wish to draw your attention to-night.

Within the last ten years I have seen several cases in my own practice, and have the notes of other cases seen in the practice of my confreres.

The disease is characterized by hemorrhages from widely different parts of the body as: Umbilicus, bowels, stomach, bladder, the skin, cellular tissue, muscles; internal organs, as liver, spleen, suprarenal glands, etc. There may be one or several locations from which the blood comes. It may be merely an oozing, or there may be sufficient blood lost in the space of a few hours to blanch a baby. It usually appears between the first and seventh day, and a large proportion of cases end fatally.

CASE I.—Baby W., born 12th January, 1896, full term, normal labor, female; weight, 8½ lbs. Father and mother well and healthy. Five other children, well and strong. Baby nursed well.

In 36 hours after birth blood was noticed on binder. It was to be seen coming from around the cord at the skin margin, where some clotting had already taken place. Slight pressure stopped it, but on removing the pressure oozing continued. Within 12 hours blood was seen coming from the vagina, and within 12 hours more, or 24 hours from onset of bleeding, vomiting of bloody mucus which continued almost until the baby died on the fifth day, three days from the commencement of hemorrhage.

Treatment.—Tannic acid compresses, and hot tannic acid solution as a vaginal injection.

The major portion of the blood came from the stomach; even this was small in amount.

The late Dr. Martin, Carlton Street, saw the baby in consultation on the fourth day. Slight jaundice noticed after the third day. Temperature not taken. No autopsy. No history of hemorrhage in either family.

Case II.—Baby S., female, born 10th June, 1897, the second child. The first is alive and well now. Forceps used. Weight 8½ lbs. Puerperium normal. Father and mother healthy. Mother died last year (nine years after), of tuberculosis of the kidney. Hemorrhage began about 36 hours after birth, and came from the bowels and bladder in small amounts and continued for two days. Temperature not noted. Child never seemed very ill, failed little in weight or plumpness, but became anemic. The only treatment for the hemorrhage was rectal injections of salt solution. Did well for six months, when she was found smothered in a hammock. No history of hemorrhages on either side.

Case III.—Baby G., born 10th May, 1900, full term, male; weight, 10 lbs. Father well, but mother somewhat nervous, but never had any serious illness. One sister alive and healthy. Baby nursed and seemed well until hemorrhage began at the end of the second day. It came from the bowel and 12 hours later from the stomach. Nose-bleed and purpuric spots on arms and legs occurred before the end of the third day. Temperature, 100 to 101. No jaundice. Seen by Dr. Starr on the fourth day.

Treatment.—Normal salt solution injected into the bowel and tannic acid solution into the nostrils.

Died on the fifth day.

No hemorrhage on father's or mother's side.

Uneventful recovery from the confinement. Confined 30th December, 1903, of a healthy child.

Case IV.—Baby H., born 25th February, 1901, full term. Chloroform given by Dr. F. N. G. Starr, and forceps applied; female; weight, 8½ lbs. Nursed within a few hours. Father and mother healthy. One brother alive and well. Hemorrhage first noticed on third day, from the bowel. At first it was blackish,

with a faint pink tinge at the margin of the mass; later it was a mixture of black and red blood. Within 12 hours vomiting of fairly bright red blood began. By that time baby was unable to nurse. Vomiting occurred whether baby nursed or not. More blood was lost by the bowel than by the stomach. On the fourth and fifth days the baby looked positively bloodless and seemed on several occasions *in extremis*. Lost weight very noticeably. In three days after the first appearance of blood it ceased somewhat suddenly. The baby began to improve very slowly. It was fed mother's milk by a dropper, and in a few days by a spoon. In a week after the cessation of bleeding she began to nurse again. Temperature at no time over 101 F. Slight jaundice after a week. The cord dropped on the seventh day. No bleeding from the stump occurred.

Treatment.—Ergot internally and rectal injections of normal salt solution.

No hemorrhage in father's or mother's family.

Case V.—Baby C., born 9th December, 1903, full term, first baby, male; weight, 10 lbs.; chloroform and forceps. Father and mother well and healthy. Baby well and strong and nursed within a few hours. Early in the second day hemorrhage was noticed coming from the margin of the cord, where it was beginning to separate from the abdominal wall. At first it was only a slight ooze. Within six hours it was oozing freely, in spite of compresses of tannic acid and, later, styptic cotton, changed frequently. Within twelve hours blood was seen in the stools and petechial spots on the legs. Temperature never less than 103 F. from the time bleeding was first noticed.

Treatment.—Calcium chloride, given internally, and rectal injections of normal salt solution.

Death in twenty-four hours from the beginning of the hemorrhage. Most of the hemorrhage seemed to come from the umbilicus. All told, there did not appear to be sufficient to cause the baby's death.

The short illness, the persistently high temperature and the comparatively small amount of blood lost are suggestive of an infection.

No hemorrhage on either side of the family.

Case VI.—Baby M., born 19th March, 1906, full term, chloroform and forceps, male, first child; weight, 6 3-4 lbs. Father and mother of highly neurotic temperament. Baby nursed within six hours and seemed strong and healthy. A small abrasion was made by the blade of the forceps over right frontal bone, about ⅓ of an inch long. Only the outer cuticle was cut through. Little or no bleeding occurred from it. Both eyelids seemed swollen and everted, as if from intrapelvic pressure. Baby cried

when slapped. In the afternoon of the same day a small cephalhematoma was noticed over most of the right parietal bone and also some slight discoloration over the left upper eyelid. The discoloration was thought to be due to the trauma of labor.

20th. Baby nursed and seemed well, though cross and fretful at night. Hematoma well within margin of parietal bone, but larger, more freely fluctuating and tender to touch, stain over left upper eyelid more marked.

21st. Baby cross and fretful and apparently in pain all night and markedly so on touching the tumor of the scalp. Tumor increased in size, stain of eyelid more marked, but no thickening, swelling or bogginess.

22nd. Baby did not sleep all night. He kept up a constant fret all night, and while he took water readily would not nurse. At 9.30 a.m. both upper and lower lids of left eye were much discolored, swollen and boggy and a thin bloody discharge was oozing between them. Found free fluctuation over whole of right parietal, part of temporal, part of left parietal, and the right ⅔ of occipital bones. There was marked tenderness over this area. He flinched and cried on the least pressure. Several new foci were to be seen this morning: A newly discolored area, 1½ x 2½ inches, on the outer surface of the humerus, three or four small discolored areas about the knuckles, some discoloration and blood on the roof of the mouth, a large dark patch below and behind the left ear, some bleeding from the left nostril, a trace of blood in one vomit, slight bleeding from around the cord. Temperature, 101 F. Calcium chloride was ordered by the mouth. Later in the day Dr. Reeve, Dr. W. P. Caven, and Dr. Adam Wright saw the case with me. As the calcium chloride had by this time upset the stomach, it was decided to give it per rectum, and adrenalin solution in gtt. i doses by the mouth and gelatin 2 per cent. solution every hour or two, also by the mouth.

9.30 p.m. Eyelids were more swollen and bursting in appearance, everted, and oozing. Vomiting began after a few doses of gelatin. This preparation was not a nice one. It was yellowish, thick, gluey and smelled like a glue-pot. It was therefore ordered to be injected into the bowel, ½ oz. every hour. Face very pale and in marked contrast to the discolored (almost black) and bulging left eyelid. Temperature, 102 F.

23rd, 9 a.m. Had hemorrhage from the bowel, probably not more than a couple of drams, but almost immediately afterwards he became very quiet and seemed to the nurse to be dying. I had to look closely to see that he was breathing. Saline injection ℥ i to be given every hour. Swelling over lids possibly not so tense as yesterday. Scalp apparently stripped up more, so much so that the lobe of right ear was pushed upward and forward. Temperature, 100 F. Gelatin according to the following

formula, taken from Frühwald, was ordered and found to be much more palatable than the first lot:

R Gelatin alb (Merck) ..... gr. xxx.
Sod. chlorid ..... gr. ii.
Aq. destil. ..... ℥ iii.
℥ i o.h 1 vel 2.

Skin dry, rough and parched over the whole body. 3 p.m.: Taking gelatin and keeping it down. Ordered ℥ i also to be injected into the bowel every three hours. Some new dark spots (blood) noticed on palms and backs of hands. 10 p.m.: Lies quietly except when scalp is touched, then cries as if in pain. Temperature 101 F.

24th, 10 a.m. Temperature 100 2-5 F. Had three mild convulsions during the night. Vomited after each dose of gelatin, which was then discontinued, and saline enemata to be tried again. Lies quiescent; only apparent sign of life is an occasional movement of lips. 5 p.m.: Swelling over lids less, showing eyeball between—hazy, lustreless and pushed forward from behind about ½ inch. Temperature, 100 F.

25th, 9 a.m. Temperature, 100 F. Right eyelid discolored, though not swollen now. To have whey by mouth and normal saline by bowel to be continued. 9 p.m.: Temperature, 100 F. Two dropperfuls of whey was all baby could be induced to take at any one time. Scarcely moves a hand or foot, but the color in the lips is possibly a shade better. Has wasted very markedly.

26th, 10 a.m. Takes six or seven dropperfuls of whey at one time. More bluish discoloration about forehead above and in front of the right ear. Temperature, 100½ F. 6 p.m.: Temperature, 101 F. Nurse said that at 11.30 a.m. he seemed in much pain and kept crying out at times, was restless, pale and kept lower jaw moving up and down with each inspiration. Almost collapsed again at 3 p.m., making the same movement with the lower jaw. Soon after this a red-colored patch, 1½ x 3-4 of an inch, appeared on the left forearm, which fluctuated. Ordered gelatin solution ℥ ii by the mouth and ℥ i by the rectum.

27th, 10 a.m. Temperature, 99 F. Urinates three or four times a day, and usually only with suprapubic pressure. Eye less protruding, but hazy. Lids less swollen, but black as ink. Cord dropped off; no hemorrhage followed.

28th. Much stronger, moves legs and arms freely.

29th. Takes ℥ iv whey every two hours and digesting it. No fresh hemorrhages.

31st. Takes ℥ vi of whey every two hours. Lips, cheeks and fingers a better color.

April 2nd. To try baby at mother's breast twice daily after first emptying them. Hematoma under scalp becoming circum-

scribed and less fluctuating. Small dark or bluish areas on fingers, arms and back of neck and shoulders fading.

5th. Baby able to get little or none from its mother and became cross and fretful. The nipples became inflamed.

10th. Baby's digestion upset as a result of trying to make him nurse his mother, who was markedly nervous. To have one of the condensed milk preparations for a few days until a wet-nurse can be secured.

25th. Wet-nurse obtained. Baby nurses vigorously.

May 3rd. No fluctuation under the scalp. Discoloration of eyelids has disappeared. Lids quite normal in appearance. Corneal opacity marked.

No history of hemorrhage in either family.

Case VII.—(Practice of Dr. A. H. Wright.) Baby D., born May 3rd, 1904, with forceps. Healthy and well nourished. Hemorrhages began when baby was twenty-four hours old. Purpuric spots were seen to be dotted over almost the whole body, the trunk as well as all the extremities. Within a short time blood was passed per rectum, and later vomiting of blood occurred.

Died on the fourth day.

Case VIII.—(Reported by Mr. E. D. Gillies, medical student.) Baby W., female. Mother strong and healthy. Father living and well. Seven brothers and sisters living and well. One twin brother died at twelve months, cause unknown. One infant died two years ago of hemorrhage from the bowels when two days old. The hemorrhage continued during the last twenty-four hours of its life. This baby was born on January 8th, 1906, at 5.35 a.m. It was an easy, rapid birth and cord was not cut nor tied until 6.10 a.m., and placenta expelled shortly after. Child well developed and viable. On the morning of the 9th some bright red blood was noticed in the stools, which increased in quantity during the day. During that afternoon a black-looking material containing blood was vomited. It again vomited on the morning of the 10th, and there was a slight ecchymosis on the under part of the upper left eyelid, which increased in size until it almost covered half the upper lid. The child nursed well, slept well, cried very little. Respirations, 24, sometimes sighing in character. Temperature, normal.

Treatment.—Gave calcium chloride gr. i every four hours for thirty-six hours, but movements were more frequent and seemed to contain more blood. Child cried more. Then just gave nurse and 5 m. spts. frumenti well diluted every three hours. Frequency of stools and also quantity of blood passed seemed to diminish gradually from the time the calcium chloride was stopped. Child has no blood in stools and doing well for past four days.

Case IX.—(Practice of Dr. G. E. Smith.) Baby D., mother aged 30, primipara, lame. Called on February 5th, 1906, at 8 p.m. Pains not very effectual. Applied forceps at 10 p.m. Delivered child at 11.30 p.m. Feb. 6th, at 10 p.m. (22 hours after birth), nurse thought swelling existed in region of stomach. Child vomited shortly after, the vomit consisting of a great deal of clotted blood and also some fresh blood; filled a teacup. Child had cramps before vomiting and movement of bowels later. Child continued to vomit up clots and blood. No blood in stools. Feb. 7th: Blood in stools. From 10 p.m.—4 a.m. (on Feb. 8th), *i.e.*, in six hours, had to change diaper four times; about 1½ teacupfuls in clots and red blood. Baby refused nurse and fluids. No subcutaneous hemorrhages; none in mouth. Looks very anemic; much like a marasmic baby. Scarcely any pulse. Feb. 8th: Started to give saline and calcium chloride by bowel. Very little vomit or melena. Feb. 9th: Pulse better. No vomit or melena. Child looks bad, weak and anemic. Feb. 10th: Child nursing again; no blood. Child continued in this condition for three or four days. Looked as though it might recover if it were not so weak from loss of blood. No blood appearing, stopped the calcium chloride and saline. About the 10th day died suddenly, about half an hour after nursing as usual. Possibly fresh hemorrhage may have occurred. (Intraperitoneal?)

Case X.—(Practice of Dr. A. H. Wright.) Baby —, born 30th December, 1906. Apparently healthy. Hemorrhages commenced in latter part of first day, especially under the skin, from the mouth and from intestines.

Treatment.—Gelatin by mouth, calomel, castor oil, adrenalin in minim doses of 1-1000 solution (also by mouth). After two weeks much improved. Apparently recovering rapidly for several days. In fourth week grew worse, had general jaundice, gradually sank and died twenty-nine days after birth.

I have to thank Dr. K. H. VanNorman, house physician, Toronto General Hospital, for the notes of the four following cases which occurred at the Burnside.

Case XI.—(At Burnside Hospital.) Mother confined on March 21st, 1906. Labor twenty-one hours' duration. Mother Russian, married, twenty-five years of age; forceps delivery.

March 23rd. Child vomited black fluid. Temperature, 98 1-5 F. There was also large submucous hemorrhage.

25th. Vomited black fluid containing blood. Normal saline given per rectum, also injection 15 c.c. gelatin (two per cent. solution). Blood in stools.

26th. Again vomited black fluid. Temperature, 101 4-5.

27th. No vomiting. Temperature, 99 4-5. Stools more normal.

28th. Rapidly improving. Before administration of gelatin child was jaundiced, sinking rapidly, but left the hospital greatly improved.

Discharged April 5th. April 29th, reported well.

Case XII.—(At Burnside Hospital.) Mother was confined April 29th, 1906. The liquor amnii was discharged two days before delivery. Mother, 37 years, married, English. Child delivered by version—fourth child. The first two were delivered by forceps, the third by Cæsarean section. At time of delivery child was noticed to have paralysis of right arm and a groove on the right side of the head at about the posterior region of the parietal bone. Post-mortem showed extensive subdural hemorrhages, especially at base of skull extending downwards into spinal canal. Hemorrhage about brachial plexus on right side. Fracture of right humerus, involving musculo-spiral nerve. Abdomen contained considerable quantity of fluid, apparently a rupture of a hematoma on under surface of liver. There was a second unruptured hematoma. Hemorrhage in both suprarenal capsules. Notwithstanding the above, the baby seemed comparatively well till it died suddenly on May 3rd, 1906.

Case XIII.—(At Burnside Hospital.) Mother confined May 29th. In labor thirty-six hours; 34 years old; married; Canadian; forceps delivery, which were applied for thirty minutes. When baby was twelve hours old began to vomit blood, became weak and breathed poorly. Improved slightly in the next twelve hours. No more hemorrhages, but weakened gradually, and died about forty hours after birth.

Case XIV.—(At Burnside Hospital.) Mother delivered May 30th; seven hours in labor; forceps applied for twenty-one minutes; mother Canadian; married; 22 years old. June 4th. Baby had hemorrhage from the bowel.

Causation.—The following have been mentioned: Hemophilia; septic infection; syphilis; injuries to head, which result in cerebral hemorrhages; too early ligation of cord; plethora; debility; ulcer of stomach or bowel; acute fatty degeneration of the newborn; jaundice; feeble coagulability of the blood; deficiency or defect in the walls of the capillary vessels.

Onset.—It will be seen that with two exceptions (Cases IX. and X.), the bleeding began before the end of the third day. In six it began on the second day; in one on the third day, and in two before the end of the first day. The infants had all been well with the exception of Case X., and as far as could be seen there was nothing abnormal until bleeding began.

Character.—In all the cases the bleeding began in a gradual manner.

Amount.—It is difficult to estimate the amount of blood lost

in any given case. In some of the cases the amount to be seen was not enough to blanch a child, let alone destroy it. In two the amount lost was large, notably in Cases IV. and VI. In the latter, while little blood came away externally, a great quantity must have leaked from the vessels to produce such free fluctuation under the scalp, in the sterno-mastoid muscle, in the cellular tissue of the arm, around the eyeball, etc.

Site of Hemorrhage.—It may come from any part of the body: In two cases it came from the umbilicus; in six cases from the stomach; in eight cases from the bowel; in six cases under the skin; in one case from the mouth; in one case into muscle: in one case under the scalp; in one case under cellular tissue around eyeball; in one case into abdominal cavity; in one case into suprarenal capsules, etc. The bleeding may, and usually does, come from more than one source. In none of the above cases was it confined to one site. In three cases there were two sources, and in five cases three sources, and in Case No. VI. from very many points, nearly all of which were confined to head, neck and upper extremities.

Quality of Blood.—In only two cases was there any clotting of blood: Case IV., where bright blood came from the bowel and clotted in small clots on the napkin, and Case I., where it oozed from around the stump of the cord and there clotted on the pad.

Temperature.—In nine cases it was not taken. In one it was normal, in three it was 98 1-5 to 102, and in one it was over 103 F.

Loss of Weight.—Every baby seemed to shrink very soon after the beginning of hemorrhage. The shrinking seemed to be out of all proportion to the amount of blood lost. This was noticed in the cases in which no elevation of temperature occurred, as well as in those with a fairly high fever.

Cases IV. and VI. lost weight very rapidly, and some weeks passed before any material increase took place.

Duration of Disease.—It is usually of brief and definite duration: One case died on the third day, ill one day; one case died on the fourth day, ill three days; two cases died on the fifth day, ill three days; one case died on the tenth day, ill nine days; one case died on the twenty-ninth day, ill twenty-eight days. The baby who died on the twenty-ninth day had marked jaundice during the last week. It is possible that the condition which gave rise to the jaundice, rather than the hemorrhagic condition, caused its death.

Frequency.—The disease is not of frequent occurrence. I had been in practice fifteen years before I saw my first case, or, perhaps I might more correctly say, before I recognized one. I have seen two cases in my own practice in the last three years.

It appears to be more frequent in hospital than in private practice. "Out of 6,700 deliveries at the Boston Lying-in Hospital, 45 cases occurred, a percentage of .67, or about 2-3 of 1 per cent., while in the out-patient department among 4,000 deliveries, there were 4 cases, or 1-10 of 1 per cent.

"This comparative prevalence in the hospital has no connection with puerperal septicemia, as the disease (septicemia) is practically free from the Boston Lying-in Hospital, but it occurs independently of it, just as thrush may get a foothold and flourish in a hospital although not common in outside practice."

In the Burnside Hospital, Toronto, there are records of four cases, particulars of which have just been given.

Only one case has been noted at Grace Hospital, Case X.

St. Michael's Hospital has apparently not had a case.

Post-mortem Examinations.—None were allowed in my own cases. In one, Case No. XII., at the Burnside, where a post-mortem was obtained, subdural hemorrhages at the base of the skull (the child was delivered by version), hemorrhage about the brachial plexus on the right side, hemorrhage into the abdomen from rupture of a hematoma on the under surface of the liver, also an unruptured hematoma and hemorrhage into both suprarenal capsules.

Townsend had looked up the records of 81 autopsies. In the majority of cases nothing abnormal was found, except the hemorrhages and the resulting anemia. In a very small number of cases the following diseased conditions were found: Syphilis, enlarged spleen, enlarged liver, inflammation of the umbilical and portal veins, and acute fatty degeneration.

Bacteriology.—Abt found the colon bacillus in cultures from the spleen, kidneys, liver, heart, etc., in two cases.

Kilham and Mercelis found streptococcus alone or with the diplococcus of pneumonia, bacillus pyocyaneus, bacillus lactis aerogenes, Friedlander's bacillus, bacillus of Gaertner, and negative results at times.

Histology.—"The smallest vessels have been closely examined without detecting any pathologic changes in their walls."

Diagnosis.—There was little difficulty in making a diagnosis in these cases. The bleeding began within 24 hours in two cases and before the end of the third day in ten cases. In the cases where it came from the umbilicus it was oozing in character rather than a free flow, as if the ligature had slipped. Bleeding from a loose ligature, moreover, practically always occurs within the first hour or two.

There was no history of syphilis in the parents and there was nothing to indicate it in the appearance of any of the infants.

In none of the cases was there any evidence of a septic condition in either mother or child.

There were no skin abrasions save a slight one over right frontal bone (Case No. VI.), from which practically no bleeding occurred, neither was there omphalitis in any case. While the forceps was used in nine cases and version in one, no apparent injury could be made out either to scalp or bones, with the exception of Case XII.

One naturally thinks of hemophilia where there is uncontrollable hemorrhage in young children.

The fact that hemophilia never, or rarely ever, shows itself before the end of the first year should help one to make a diagnosis without much difficulty.

The hemophilic tendency is commonly hereditary and occurs usually after slight or severe traumata.

In none of these cases was there any history whatever of hemophilia. None of the parents had ever heard of the term "bleeder."

There is no reason, though, why spontaneous hemorrhages should not occasionally occur in a hemophilic subject. Such a case is reported by Larrabee. In his case, "A slight scratch was made on the baby's scalp during the rupturing of the membranes and the hemorrhage from this was never controlled. In a few hours bleeding appeared from the cut end of the cord and continued in spite of repeated ligatures.

"After this, hemorrhage came from various parts of the body and destroyed the baby on the fifth day. This child was a descendant of a family many of whom had been bleeders for six generations."

He quotes the histories of 37 cases of hereditary hemophilia in the newly-born. One has, therefore, to bear in mind the occasional coexistence of the two diseases. That they do occur together is proven by Larrabee's cases and by occasional cases in the practice of other physicians. That they do not occur frequently is evidenced by Grandidier, who is quoted by Koplik as having records of only 12 cases of hemophilia in 575 cases of spontaneous hemorrhage.

None of my patients who survived have since shown any evidence of hemophilia. In Case IV. the cord dropped off on the seventh day, and in Case VI. on the eighth day, without bleeding from the stump in either case.

Townsend mentions two cases of acute hemorrhage in which the cords dropped off on the eighth and eleventh days, and no hemorrhage occurred in either.

Rotch records a case of spontaneous hemorrhage during the first few days of life and on which circumcision was performed on the eighth day without hemorrhage.

My cases show that about an equal number of males and

females are affected, while in true hemophilia the females outnumber the males 13 to 1, judging by Townsend's 709 cases.

Prognosis.—The greater and the more sudden the hemorrhage, the less the chance of the patient surviving. That is a broad rule which I think holds good in the large majority of cases. In Case VI. a very large amount was poured out under the scalp, how many ounces is a matter of conjecture.

On the occurrence of a hemorrhage under the skin of the arm the baby suddenly collapsed and almost succumbed. Within a few hours after this another hemorrhage occurred just above the wrist, with the same alarming symptoms.

While the amount under the scalp was many times larger than that in the arm, the bleeding beneath the scalp was gradual and did not seem to make as great an impression on the baby as the two more sudden but smaller masses under the arm.

One should not forget that the baby was almost moribund from the main hemorrhage and consequently any small subsequent bleeding would have a profound effect. This was the only case in which a large amount of blood could be said to have been lost.

"The loss of blood in these cases should no more be considered the cause of the lethal result than would the purpuric spots in a morbus maculosus in a case of cerebro-spinal meningitis with purpura, or the expectoration of rusty sputum in the pneumonia of an adult." (Abt.)

Why, then, should those infants who lost very little blood have died? I think one must consider them as acute septic or toxemic cases. Cases Nos. I. and V. were undoubtedly septic ones.

The temperature is not a correct guide as far as the prognosis is concerned. One of Abt's cases had a continuously high temperature, running up to 104 F., and recovered. Another had a subnormal one and also recovered.

Convulsions, either at the onset, as occurs in some of the septic cases, or toward the end, add to the gravity of the case. On the other hand, one of my cases had three convulsions and recovered.

Townsend's cases, with a mortality of 79 per cent., should be borne in mind when questioned as to prognosis in any given case.

In these cases of spontaneous hemorrhage one can safely predict that they will *not* have repeated hemorrhages in after years. In the cases of hemophilia one can just as safely assert that they *will* have recurrent hemorrhages and that they are likely to succumb before they reach adult life.

Treatment.—In one of these cases, No. V., the course was so acute that one would not expect much relief from any form of treatment. This child seemed to die of sepsis rather than from

the amount of blood lost. Whether gelatin would have afforded any relief I cannot say.

A great many remedies have been used in the past in these cases—many of them empirically. The three which are most used at the present time are calcium chloride, solution of adrenalin, and gelatin. The first-named was given in Case V., without any apparent effect. Adrenalin and gelatin were both given internally in Case VI., and he recovered, whether on account of, or in spite of, either remedy, I do not know. It was a case, however, in which septic symptoms were at a minimum and in which styptics appeared to be indicated.

Gelatin appears to be able to coagulate the blood of bleeding surfaces. A good illustration of this effect occurred at the Hospital for Sick Children in October last. Gelatin was given to a boy aet. 10 years, suffering from hemophilia almost since infancy. Shortly after entering the hospital free nose-bleeding took place and ʒi doses of a 2 per cent. solution were given every hour. The bleeding ceased in a few hours. In 24 or 36 hours afterward, in attempting to get a few drops of blood from the lobe of the ear for the purpose of making a blood count, it was found that blood could not be made to flow either from the ear or finger. This was a boy who bled on the slightest provocation from a scratch, or bruise, or into the larger joints without any traumatism. Yet after the gelatin not a drop of blood could be obtained from his ear or finger.

In Case No. VI. no improvement could be seen after the persistent use of gelatin and adrenalin for about 24 hours. As soon as vomiting began, 1½ oz. of a 2 per cent. gelatin solution were injected into the bowel and repeated three times, when the rectum became irritable. It was then given again by the mouth and about 48 hours after commencing it some little improvement was noticed, or to be more accurate, the baby appeared to cease getting thinner and paler. For external use, such as a bleeding navel, a 10 per cent. solution is advised by Abt.

The hypodermic injection of gelatin has been advised by a number of authors, but Abt sounds a warning against its use in this way. He gave a subcutaneous injection of 2 oz. of 2 per cent. solution to a feeble-minded girl aet. four years. Her temperature rose to 100 2-5 F. and later to 101; the pulse increased from 92 to 140, and respirations from 24 to 36. The child was restless, greatly prostrated and extremities cold. This condition lasted for 24 hours. Two other children, aged nine and two years, were also given subcutaneous injections, with a similar increase in temperature, pulse and respiration.

He then exprimented with gelatin subcutaneously in rabbits. One rabbit was not inconvenienced by injections of 60 c.c., but its blood clotted in 48 seconds before, and in 12 seconds after,

injection. One was given 60 c.c., then 250 c.c., and, finally, 500 c.c., and died some hours afterwards, having lost weight rapidly. One was injected with one injection of 500 c.c. of a 5 per cent. solution, and died in three hours after.

His conclusions were:

First. Subcutaneous injections of sterilized gelatin solution are capable of producing toxic symptoms in children.

Second. Large doses of 5 per cent. solution of gelatin caused the death of rabbits.

His explanation is that the gelatin is manufactured from the bones of animals; that the decomposition which takes place in these bones gives rise to cadaveric poisons; that these poisons are ptomains is evidenced by the elevation of temperature and the gradual condition of prostration and collapse; that ptomains may be contained in solutions which are subjected to high degrees of heat, the latter not altering their chemical nature nor their toxic property.

One has only to smell the gelatin to be reminded of a glue factory. Even when Merck's white gelatin is used, though this is probably the best on the market, its odor is not suggestive of an article which is sterile.

For that reason, if for no other, one would hesitate to use it subcutaneously. Abt thinks it would be difficult to state what a safe dose of gelatin would be, given subcutaneously, to a newborn infant, but that the local use and the use by the mouth are warmly recommended.

I think if the stomach rebels at prolonged dosing, as it did in Case VI., one should not forget that absorption takes place rapidly from the rectal walls.

This would seem to be a much safer method of introducing gelatin than the subcutaneous one.

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DEMENTIA PRAECOX.*

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That the importance of dementia praecox, viewed both from the standpoint of etiology and symptomatology, is very differently regarded in America by psychiatrists of undoubtedly high rank, is well illustrated by recent literature. In two important textbooks, published within the last year, we find the author of one disposing of the whole subject in three and a quarter pages; in the other no less than forty-one pages are devoted to an elaborate discussion of this vexed question.

Then, again, when one studies the classification of mental diseases in annual reports, he finds that in many instances dementia praecox does duty to an extent that is scarcely credible to those psychiatrists who are content to make haste slowly. That nearly 40 per cent. of the admissions to any institution are suffering from this form of insanity is difficult to accept, and yet that is what we are asked to believe. On this side of the Atlantic we are very apt to become radical at times, and as so many of our alienists, owing to methods of appointment, have lacked training in clinical work in hospitals for the insane, it is not to be wondered that, at times, ill-digested results are put forth as facts.

It is significant that as thorough an investigator as Kraepelin has never yet given an absolute definition of dementia praecox, although he has not hesitated to change his opinion many times regarding the groups of cases which should possibly come under this heading.

The difficulty in all of these discussions is that of sifting the wheat from the chaff, and of aiming at something definite regarding this idea of classification.

That the name is unfortunate goes without saying, especially if we are to include cases which cannot fairly be called precocious, and others which are written off the records as recovered. If the etymology of dementia is worth anything, it seems a pity to destroy the meaning of the term, and certainly precocious is not the word to use in connexion with advanced life. As a matter of fact, the name dementia praecox must only be regarded as tentative, and will perhaps answer all necessary purposes until modern clinical methods have been long enough in vogue to enable us to determine what scheme of classification is ultimately to be adopted.

That prognosis will be the basis of this scheme is generally believed, although excellent arguments against such a plan have been advanced.

* Read at meeting of the British Medical Association, Toronto, August 21-25, 1906.

Psychiatry is a most difficult study, and, as has been pointed out by Dr. Adolf Meyer, certain terms denote absolutely different trains of thought in different writers. Some of the younger authors have not as yet discovered the depth of the waters into which they have so bravely and enthusiastically plunged, but where so much admirable work is being done it would be ill-natured to criticize; and, after all, psychiatry as a whole requires just such devotees as those who are concentrating their energies on the study of dementia praecox.

The solution lies in careful clinical investigation, and until this has been carried on systematically for years the battle will go on with vigor, and the slain and wounded in the fray will not be few.

Nearly all alienists are agreed that what is so frequently called the "Kraepelin idea"—although it is questionable if the whole credit should be given to this eminent author—is the one that points to the most hopeful line of investigation to put psychiatry on a more solid basis than has yet been the case.

The great danger at present is that of squandering our energies in too many directions, and the violent efforts of many writers to bring widely-divergent classes of cases under the one heading are to be deprecated. Want of clearness has been the besetting sin of our science in the past, and if we are to adopt the Kraepelin departure we should do so with our eyes wide open to the difficulties and complications likely to be encountered.

To strain a classification to such an extent that 40 per cent. of the admissions of a hospital for the insane can be included under the heading "dementia praecox" is certainly adding little to science, but rather tending to befuddle the whole subject. That there is a place in our classification for dementia praecox most of us freely admit; that the three classical groups which so often merge into each other exist is abundantly evident to those who have puzzled for any number of years over the disappointing results in evolutional cases of insanity.

The experience of any alienist will enable him to easily classify the patients in whom the prognosis is absolutely unfavorable, but the more doubtful cases are not so easily disposed of, unless we are willing to accept recovery as proof positive that dementia praecox did not exist. If we may safely go that far in general paresis, why not in the other cases, if the pathological lesion can be as definitely traced and fixed? The allied states are the great difficulty and we should certainly be very conservative, and it would be well to go slowly in fixing their place until a good deal of the fog has been cleared away.

These remarks apply particularly to the hebephrenic and katatonic groups. Then, again with paranoiacs it seems a grave mistake to place all of these under the paranoid heading, as some are inclined to do. While it is true that the term paranoia has been

greatly overworked, in some quarters it has a place in psychiatric literature and conveys a definite meaning.

The statement is sometimes made that the paranoid cases appear much later in life than hebephrenic and katatonic varieties, but this will bear further examination and study.

My experience has been that such patients, who drift into institutions towards middle age, have as a rule, a history of dementia, occurring at the early, evolutional period, with symptoms so carefully masked and guarded that they are not suspected by the ordinary observer. Half of our difficulty in dealing with the diagnosis and prognosis is occasioned by the impossibility of getting at the earliest proofs of the mental change in the patient. Having seen a few cases develop, from the beginning, during my school days, a very pronounced belief that true dementia praecox is a disease taking several or, perhaps, many years to reach its final stages, is firmly fixed in my mind.

Then, again, we must remember that, until we thoroughly understand the pathological basis of this and other forms of degeneration, it cannot be possible to speak absolutely of symptom pictures, which are found in certain deterioration processes and simulated in others, where the prognosis is not unfavorable. To differentiate these at present is a difficult, if not impossible, task.

Dr. Adolf Meyer is undoubtedly right when he says that he would like to make the most of what Kraepelin's departure has added to psychiatry. He would insist on the desirability of singling out the cases, which are beyond all doubt in the experience of any alienist in accord with what Kraepelin describes; in other words, he would class as dementia praecox those cases in which there is no doubt about the completeness of the picture, and as "akin to dementia praecox" where the relation is more superficial.

In view of the fact that Dr. Meyer is here to speak from this text, and is to be followed by Dr. Dercum, whose recent contribution to the *Journal of Insanity* contains so much of interest in connexion with the subject, it is clearly a duty to leave the discussion of details to those who are so competent to deal with them, and merely refer to the broad generalities.

If it can be shown what is the pathological basis of the morbid conditions which make the genesis of dementia praecox at the evolutional epoch of youth to adolescence, a wonderful step forward will have been taken, and investigators must not overlook this, and I would ask Dr. Meyer and Dr. J. Turner particularly what hope we have of a solution of this most important problem? The morbid conditions must have a definite basis, and until we know what that is there must be no end of groping. As Clarence B. Farrar has so clearly pointed out, "their exact etiology is entirely obscure, and so long as this is the case, so long as the exact causes are unknown, which must be in operation in order that the disease may make its

appearance, it is futile to assert that they may not become operative beyond as well as during the puberal epoch."

If it could be shown, for example, that the origin was purely toxic, a reasonable basis for treatment on rational lines, or even for prevention, would exist. Without definite scientific knowledge this is scarcely possible, or even probable, and we cannot overlook the fact that the degeneration processes appear most frequently, if not altogether, in persons with a bad heredity. The toxic theory is, of course, one that has much to commend it, as certain of the developments in the course of dementia praecox apparently are the outcome of toxic conditions, but that this will prove to be the whole explanation is extremely doubtful. The problem is evidently a more complicated one than that; we must look for further light, not only to the clinicians but the pathologists in particular. Possibly the whole truth will not be known until the physiologists have made clear the functions of some of the glandular structures and their relation to the nervous system.

To the conservative mind the situation is not hopeless, and certainly if any form of mental trouble deserves careful and earnest investigation it is this, where the prognosis is so invariably bad. Still, the fact that many patients improve and a few recoveries are said to take place, should prove a stimulus to the most thorough and exhaustive study. And yet, the facts regarding prognosis and treatment thoroughly digested?

In discussing these questions briefly in Boston, at a recent meeting of the American Medico-Psychological Association, I took it for granted that the term was to be used in a limited sense, with particular reference to the three classical forms as described by Kraepelin, rather than to the allied states about which so much is being said and written. It was thought well to be brief and cautious, as so much difference of opinion exists in regard to the proportion of dementia praecox admitted to various hospitals for the insane. Kraepelin places the percentage at 14 per cent. or 15 per cent. Some enthusiasts in America state it at about 40 per cent.

Then, again, when the subject of prognosis is considered, the question, What is a recovery? at once crops up, and when we compare facts with statistics we are confronted by the suspicion that the word "recovery" conveys a very different meaning to alienists of varying mental types. Many of the so-called recoveries from dementia praecox should not be classified as such. Modern methods of clinical investigation have not as yet been long enough in use to enable us to speak definitely of the prognosis, and when it is remembered that very few alienists agree regarding the classification, it is reasonable to accept, to a certain extent, the ancient dictum which tends to a belief that dementia is a condition dependent on structural changes that preclude the hope of recovery.

Possibly to make such an actual statement is going further than is justified by actual facts, because certain cases which seem fairly to come under the heading "dementia praecox" recover; and yet the proportion is so small that they may almost be regarded as the exceptions which prove the rule.

When we consider that dementia praecox generally takes years in its development; in fact has often reached what might be called the terminal stages when the alienist sees it, the reasons for the grave prognosis are at once apparent.

To assert categorically that this disease is incurable is of course going too far, and such a statement cannot be justified, but it is not beyond the strict truth to say that most of the so-called recoveries should be classed as cases of remission, or put under the heading "improved." That the term "remission" is to be applied to many of these conditions is sooner or later revealed; in fact, so many of these people are abnormal from an early age, that it is difficult to know what should be called the normal standard to judge them by. Possibly, the striking improvement that occasionally takes place in apparently hopeless demented katatonics, improvement so marked that they are able to accept a limited amount of responsibility in daily life, once more leads to errors in the classification of recoveries.

What science demands is an accurate statement of facts. It would be unwise, then, at this stage of investigation, to attempt to even approximate the percentage of recoveries from what is evidently one of the most incurable of all mental diseases.

Nothing more profitable than a discussion of this whole vexed question could concern this meeting, and we are fortunate indeed in having such competent authorities as those who follow me to throw new light on it.

CONCEALED ACCIDENTAL HEMORRHAGE.*

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Only a very limited portion of the large and complex subject of concealed accidental hemorrhage will be dealt with in this paper —that form which occurs in the latter part of pregnancy before effacement or dilatation of the cervix.

There is by no means a consensus of opinion as to the symptoms of this condition. When first described by Baudelocque in 1818, Mme. Boivin said that neither she nor Mme. La Chapelle had seen an instance in over 42,000 labors.

It is now generally conceded that many such cases are overlooked, and that the condition is more common than was formerly supposed. My own experience confirms this, and I believe that in the majority of cases it is not even suspected by the physician in charge. Although my field in obstetrics has been small compared with that of Mme. Boivin and others, yet five cases have come under my observation, and I am in accord with those who believe that a large proportion of the sudden deaths in pregnancy are due to this condition.

The following description from Storer gives us a striking picture of the condition of a patient suffering from such a traumatism:

"There is . . . a type of cases in which the mortality is . . . nearly 83 per cent. Of this the following would be a picture: A woman in the last months of pregnancy, very likely a few hours after a slight blow or some great emotion, is suddenly seized with sharp cutting pain in the upper uterine zone. After a short time this pain is replaced by a dull, continuous ache. The attack is very much like an ordinary colic in many ways, and, in lack of anything like labor pains or external hemorrhage or anything else to call especial attention to the uterus, the woman is treated under that supposition. The faintness and clammy skin are looked on as the natural concomitants of nausea, and not till valuable hours have been wasted does the increasing prostration suggest to the attending doctor that he has to do with anything more serious than colic. Meanwhile the uterus has been slowly increasing in size, eventually paralyzing by over-distension any tendency on its part to contract, while the cervix is hard as iron and totally undilated and unyielding, and the patient going to die unless the hemorrhage is stopped. Here the indication is

* Read at the meeting of the British Medical Association, Toronto, August, 1606.

plain enough, till the uterus is empty the patient's life is in extreme danger, but how to empty it is by no means an easy question. It is no trifling matter to dilate such a cervix not softened by the previous slow advent of labor. There are many cases on record where a couple of hours or so were spent in fruitless attempts at dilatation, and after all the woman died undelivered, so that if the dilatation could at last be accomplished the constant and long-continued hemorrhage had been too great for reaction to take place."

SHOCK.

I have not seen any such distension of the uterus, nor do I think death is generally due to the "long-continued hemorrhage," and my chief aim is to show that in a certain, and probably large, proportion of cases of concealed accidental hemorrhage the symptoms are due to shock only, and not at all to loss of blood. The consideration of certain features in connection with two cases will be found interesting in this connection.

CASE A.—Patient, aged, 33, 4-para. Labor pains commenced at midnight; very severe pain at 8 a.m. Seen by Dr. W. P. Caven at 9.30; condition very serious. Doctors McKenzie, Ross, and I were summoned; patient anesthetized and delivered (*accouchement forcé*) at 11.30; death shortly after delivery. Dr. McKenzie expressed his surprise at the serious result from the outpouring of so small a quantity of blood (apparently less than one quart).

In this case we thought the loss of blood was to some extent the cause of death, accepting as we did at that time the view of Goodell, Holmes, and others, that the "anemia rendered the woman less able to withstand the shock incident to forcible dilatation" (Holmes).

The essential feature of shock is its sudden onset, while the main characteristic of collapse is extreme exhaustion, due in many cases to loss of blood. While our patient suffered from both shock and collapse, it is likely that the shock largely predominated. Further reference will be made to this case in speaking of treatment.

CASE B.—Patient, 3-para, aged 34, when about seven months advanced in pregnancy was suddenly seized with severe abdominal pain while driving. The pain was produced by a jar caused by the carriage wheel passing over a stone. The patient went home (only a short distance) as soon as possible, and Dr. Wright saw her within a few minutes and found her cold, pale, weak, and suffering intensely from "tearing" pains over the abdomen.

Treatment.—Artificial heat applied to surface; two doses of nepenthe, followed by hypodermic of morphine, were given; pain much diminished in an hour and a half, after which she rallied with the aid of small doses of strychnine and stimulants, and was

comparatively comfortable in three to four hours. Four days after the accident uneventful labor occurred, the placenta showed evidence of being nearly half detached, and a comparatively small clot of blood was found—less, I think, than would be produced from a pint of blood.

This case was very interesting and instructive. I was fortunately able to reach the patient soon after her accident, and remained with her some hours. The shock was so intense that at one time I thought she would die. Concealed hemorrhage was suspected, but no enlargement of the uterus could be detected.

In a very small proportion of cases the outpouring of blood causes the stretching of the uterine walls; the amount of blood thus lost becomes then an important feature and may cause dangerous collapse. Anything of the sort, however, I have never seen, and the condition must be exceedingly rare.

I was amazed to find that such a small quantity of blood-clot could have produced results so momentous, and yet this should not have caused much surprise when one considers the disastrous results produced by the injection of water between the membranes and the uterine walls for the purpose of inducing labor as practiced fifty years ago. Simpson, in 1861, reported two cases in which such injections caused death. In both instances only a few ounces were injected. He also said that both cases occurred in the hands of most accomplished accoucheurs.

Treatment.

Although Goodell's paper on the subject was a masterpiece, it is by no means certain that it accomplished much good. It seemed to give a singular impetus to the operation of *accouchement forcé*, especially on this continent, and the general feeling manifested during the discussion of two years ago was that this is an exceedingly dangerous procedure.

Goodell described in a very graphic way the symptoms of the accompanying shock, but he did not properly differentiate between the shock and the exhaustion from loss of blood. He said the cardinal rule in accidental hemorrhage was to measure the loss of blood by the severity of the collapse. He told us as soon as an accurate diagnosis was made it was imperative to deliver the woman as soon as possible. He repeated this to some extent in his closing sentence, which was as follows:

"Whenever the symptoms are obscure and the diagnosis doubtful, act as though the case were one of concealed hemorrhage and follow the precept laid down by Theodore Mayerne for the management of floodings: 'Praestantissimum remedium est foetus extractio.'"

Holmes, in his admirable paper on this subject, in quoting

this sentence, says: "Apply this precept too early rather than too late."

In considering treatment it should be remembered that certain methods which are useful in some forms of accidental hemorrhage are absolutely contraindicated in the concealed variety. In the cases which I have reported to-day there was a vast difference in the two conditions. In Case A the hemorrhage occurred during labor after effacement of the cervical canal and some dilatation of the os. Under such circumstances the modified *accouchement forcé* required little or no violence. In Case B the cervix was intact and the os "as hard as iron."

Accouchement forcé during shock with such symptoms as I have described almost invariably causes death, and the following should also be avoided: friction, electricity, nitroglycerine, amyl nitrite, ergot, quinine, rupture of membranes, steel dilators, various kinds of dilating bags, and the vaginal plug.

It is both interesting and profitable to read the histories of such cases in the days of Murphy, Ramsbotham, Oldham; important lessons may be learnt from them as to treatment. One method was what we may term the expectant plan—that is, to treat the various symptoms according to their urgency or severity. The administration of opium for pain and shock was quite common, although the doses were frequently too small. As for my treatment in Case A, after slight labor pains had continued for some hours, the uterus passed suddenly into a condition of spasmodic contractions with continuous pain, amounting to intolerable anguish, but accompanied by no expulsive efforts. Unfortunately the woman was not seen by a physician for about an hour and a half after the commencement of this storm; thus valuable time was lost, and the condition had become very serious. It seems possible, if not probable, that if suitable treatment had been instituted for shock when it was urgently needed, and before any attempt was made to empty the uterus, the result might have been different.

In Case B the patient received prompt treatment for shock, which it seems reasonable to suppose saved her life.

Conclusions.

I have not had enough experience to speak with authority, but venture to make certain recommendations as to treatment. What I have called shock is a serious condition, which, although produced more or less suddenly, is due to a traumatism to some extent continued and sometimes repeated, and it must be treated.

1. Give 1-2 grain of morphine by hypodermic injection; give a second dose of 1-4 grain in half an hour or less if required; give a third dose of 1-4 grain in another half-hour if required.

This means 1 grain in one hour. It seems better to name definite doses, but of course this must be left to the judgment of the accoucheur. This recommendation is made notwithstanding the fact that some surgeons think that after shock is established morphine given alone may cause depression. The aim should be to administer morphine before profound shock is produced. However, pain is such an important element that the morphine is probably always indicated, but it may be safer to administer with the first dose 1-120 grain of atropine.

2. Lower the patient's head and elevate the foot of the bed.

3. Keep up the body temperature by the external application of artificial heat.

4. Administer a high enema of salt solution. We are told by Chile and Malcolm that the veins will not absorb fluids during shock, and therefore any hurried attempt to inject the solution into the veins is not advisable, but during recovery from shock the veins absorb the fluids rapidly, even by the bowel. Subcutaneous or intravenous injections may be sometimes advisable.

5. Give small doses of strychnine (not more than two doses of 1-30 grain each by hypodermic injection within one hour). Large doses of strychnine during shock are exceedingly dangerous.

If relief is afforded by these means no further active treatment may be required. If, however, it is impossible to relieve the symptoms, we may be placed in a better condition for operative procedures. I give no definite opinion as to when operation should be considered necessary, but think that in a certain proportion of cases it should be performed within a few hours. Most modern surgeons and obstetricians, both in the Old World and on this continent, agree that the operation of election under such circumstances should be either vaginal or abdominal Cæsarian section.

Selected Articles.

THE RATIONAL TREATMENT OF FEVER IN THE PUERPERIUM.*

BY SAMUEL M. BRICKNER, M.D.,
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In the practice of medicine and surgery in general, certain underlying principles, scientifically applied, must always be the guides to the treatment of disease. This holds true of internal medicine, of surgery, and of all the specialties. Without a diagnosis, treatment is either futile or harmful. Diagnosis is made with the aid of two great factors,—the history of the patient and of his illness, and the result of the physical examination.

It has always been a source of mystery to me why such striking contrast should exist between all the other branches of medicine and the particular subdivision which has to do with fever arising during the puerperium. We are not contented, for instance, in internal diseases, unless we have finely drawn and accurate distinctions in diagnoses; while we have been accustomed to satisfying ourselves with the promiscuous label "puerperal sepsis" when a parturient woman becomes subject to infection of one kind or another, totally ignoring the basic lesions. As a result of this anomalous condition, the treatment of affections accompanied by fever in the puerperium has been wofully misunderstood or misinterpreted. There is not and cannot be any routine treatment of puerperal sepsis as an entity. As in all other phases of disease, correctness or efficiency of treatment depends upon a correct interpretation of the cause of the fever, and upon an efficient application of therapeutic measures adapted to the various types of disease which manifest themselves during the lying-in period.

Since this paper is intended to be exclusively practical, I shall avoid the discussion of the prevention of septic conditions as far as it relates to the ante-partum period, and shall content myself with submitting to you a brief outline of some of the varieties and forms of fever as they arise during labor and in the puerperium. It may not be amiss, however, first to say a word as to the methods of diagnosticating these conditions. A general physical examination is absolutely essential, for the pyrexia may well

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have its source in a lobar pneumonia, in a pulmonary infarct, in a mastitis or in a thrombo-phlebitis of the femoral vein, and these all without any septic source in the genital tract itself. Moreover, it is by no means rare to have a typhoid fever, malaria or any of the acute infectious diseases make itself known during the puerperium as well as at any other time. But even if any of these conditions is present, the local examination must never be omitted. And this must include not only a complete and thorough bimanual examination, but an inspection of the visible parts of the genital tract as well. Take advantage, if possible, of the microscopic aids to diagnosis also. A leucopenia where a leucocytosis was expected, in a recent consultation case, turned the diagnosis from sepsis to typhoid fever. A negative culture from the intrauterine contents and a negative blood culture will often prove of comfort while the exact diagnosis is still *sub judice*. Positive cultures, too, are valuable not only in establishing positive diagnosis, but in suggesting the line of treatment to be followed.

We shall have a better comprehension of what to do in the different varieties of fever in the puerperium if we sketchily go over the types of pathological conditions. We must first make the great subdivisions of extra-genital and intra-genital sepsis. Under the former, the principal lesions encountered will be mastitis and phlebitis of the femoral veins. The treatment of inflammation of the breasts has become much simplified of late by making small incisions only to permit the escape of pus and by applying the Bier suction treatment thereafter. The treatment of the breasts before the inflammatory mass has broken down is best accomplished by ice-bags and properly applied massage; but the ideal treatment is prophylactic, by keeping the nipples scrupulously clean during pregnancy and during the nursing period and promptly and efficiently attending to cracks and fissures in the nipples when they arise. For this purpose I have found nothing equal to a 30 per cent. ichthyol ointment in white vaselin, compelling the child to nurse through a nipple shield as long as it is applied.

Phlebitis of the femoral vein or veins is a complication which, although it may give rise to high temperatures, is not necessarily on that account of a septic nature. I have found it particularly liable to occur in women with rapid labors and in those who have varicose veins of the leg. It is an unavoidable complication and if it is not of a septic nature will usually yield to rest, elevation of the leg and the application of heat or cold.

The conditions which most interest us, however, are those of intra-genital sepsis. These again may be subdivided into two groups, the extra-pelvic lesions and the intra-pelvic. The former include vulvar and vaginal forms of sepsis and conditions in the

abdominal wall, such as necrosis. This I can dismiss in a word, as it is always secondary to necrosis of the cervix and its adjacent structures and is in all instances due to undue pressure exerted by instruments during labor. The vulvar lesions arise by infection of parts injured during labor. They may be nothing but bruises covered by a dirty gray membrane, or there may be a moderate or extensive necrosis of tissue. The vaginal injuries are usually of the same general nature, although here, too, the gonococcus may play an important rôle. At this point, I may be permitted to emphasize one of the most important elements of this brief address. It is in this class of cases that the gravest error is often committed by him who is not a careful observer. The physician is not satisfied with finding merely the external genitals involved as I have described them; but on finding his patient with a moderate rise of temperature, preceded perhaps by a chill, he proceeds at once to give an intrauterine douche, with the result of carrying the infecting material from the vulva, where it was harmless, into the uterus, where it may become fatal. Some of the most violent cases of uterine sepsis which I have seen in consultation and hospital practice, have originated in this manner. The treatment of vaginal or vulvar sepsis is of the simplest kind. A mild antiseptic vaginal douche may be given (lysol, sublimate), an iodoformized gauze strip is to be laid in the vagina, and the vulva covered with a bland wet dressing (boric acid, liquor Burrowii). But the vaginal douche must never be given until the vulva has first been cleaned.

Turning now to the intra-pelvic conditions giving rise to sepsis, we may have involvement of the cervix, the uterus, the tubes and ovaries, the parametria or the peritoneum. It is in this anatomical field that one encounters those cases in which absolute knowledge of the pathological process is essential if the patient is to be helped; although I regretfully confess that even with this knowledge, we are often unable to be of the slightest service in averting a fatal termination.

Since the short time at my disposal prevents a thorough consideration of all the phases of sepsis invading the upper part of the genital canal and the peritoneum, I prefer to confine myself to the treatment of some of the septic conditions of the uterus, the appendages and the parametria.

Taking up the uterus first, there are three conditions concerning which I shall speak. The first is a condition arising antepartum, concerning which much confusion has existed. I refer to premature rupture of the membranes which is not followed within eighteen to twenty-four hours by labor pains. Under these circumstances, unless the most rigid aseptic measures are preserved, and the vulva is adequately protected, a direct line of communication exists between the external world and the interior

of the uterus. Infection is thus easy, but is, as a rule, of the sapremic variety and subsides under the appropriate treatment of intrauterine irrigation. The prophylactic treatment of this condition is to induce labor if it does not spontaneously begin within twenty-four hours after the rupture of the membrane.

The next of the uterine forms of puerperal infection to be considered is also one concerning which there has been much misunderstanding and an enormous amount of useless therapeutic endeavor. This is retained secundines,—either of small portions of placenta or of shreds of membranes. I shall go somewhat deeply into this theme, for its importance deserves thorough discussion. The attending physician always knows, or should know, whether or not the entire placenta and its appendages have come away, for no accoucheur performs his entire duty to his patient unless he examine the placenta and the membranes with the greatest minuteness after their delivery. The cotyledons should be complete and the membranes intact except for the opening at the site of rupture. It is, however, a false theory that advises entrance into the uterus for a small piece of placenta or for a shred of membrane. These will eventually come away by themselves without giving rise to any disturbance if the labor has been conducted aseptically, or if the uterus has not become the site of an infection before labor. The hand inserted into the uterus is more dangerous than the small piece of placenta or secundines.

Let us now assume that the physician has thoroughly satisfied himself at the time of labor that the placenta and secundines were delivered in their entirety. In three or four days the patient has an elevation of temperature, with or without a chill. What is the routine treatment as generally practiced? It is to curette the uterus. This is, perhaps, one of the most serious and often fatal blunders that can be made. There is no object in curetting an empty uterus, and the result obtained is usually only to break down the protecting barrier with which the blood sinuses and lymph channels have been provided. There is but one condition in which it is wise or safe or sane to curette the puerperal uterus, —that is when it is positively known that portions of placenta have not come away. If there is doubt about it, it is even better to leave the placenta in place than to curette without proper assistance, and without aseptic conditions. I saw a uterus but two weeks ago in which a placenta had been retained for a year and a half with no bad symptoms except occasional menorrhagia.

May I say one word more on the subject of curetting? The sharp curette is absolutely out of place in the soft and friable puerperal uterus. The blunt loop is the only instrument suitable to use under these conditions, and this can often be laid aside for the finger. But if a curettage is decided upon, let it be done cleanly, with proper assistance and, if necessary, with anesthesia.

I truly believe that less harm is done by a retained placenta than by the curette used by the physician alone with the patient simply placed across the bed and the operation performed with the same *sang froid* as a hypodermatic injection is given!

I come now to the third of the uterine forms of sepsis which can be easily and successfully treated if the proper diagnosis is made. I have seen a number of cases in which on the fifth, sixth and seventh day the patient has a chill followed by high fever. An examination quickly discloses the fact that the heavy uterus has fallen backward, lying either in retroversion or in retroflexion. Because of the position of the uterus, it is impossible for the lochia to escape and they rapidly putrefy. The condition of the patient may look very alarming, but after a thorough intrauterine irrigation with salt solution and replacing of the uterus—keeping it in position with a good sized gauze packing in the posterior fornix—the patient will be on the high road to recovery within twelve hours. This condition can be avoided by letting the patient lie on her side or on her abdomen frequently after the second day post-partum, and, of course, she must do this daily if she has already suffered from a retroflexion in the puerperium. There is no occasion for keeping women entirely on their backs during their lying-in period; they will avoid at least this form of sapremia.

I would like to add one word as to the method of giving intrauterine douches. There is but one proper way. The cervix must be exposed by a tri-valve speculum or by Briesky's or Simon's speculum, then seized with a tenaculum or bullet forceps and brought well in view. The vagina, of course, must be first thoroughly cleansed. The cervix is then carefully wiped off with wet sponges and the intrauterine douche point or catheter inserted. The method most in vogue, of placing the finger against the cervix and carrying the douche point through the vagina over the hand into the uterus, can accomplish one thing with certainty—the carrying of infectious materials into the uterus from the vulva, the vagina and the hand.

Let us now take up the tubes in their relation to puerperal sepsis. They are never involved alone. When they become the seat of an acute infectious process, there is always an accompanying peritonitis of a local type, and the tubes and intestines, and often the uterus, ovaries and bladder, become agglutinated into an inextricable mass. The main thing in these cases is to differentiate between tubal disease and parametritis. But it is not an essential thing to do so, for the subsequent course of the illness will determine this differentiation and the treatment of both at first is identical. This consists only of rest in bed, ice-bags or heat over the lower part of the abdomen and frequent, long, hot douches. They are to be operated upon in the acute stage never!

An exudation into the parametria, it is true, may break down in the course of a few weeks and form a pelvic abscess, when it may be opened through the posterior fornix. But an acute pyosalpinx must be left untouched until the process has become subacute or chronic. It is then safe to operate; it is usually fatal when attacked in the acute stage.

I have already practically described the treatment of acute parametritis. The diagnosis is easy. One will find a large, heavy uterus, usually quite immovable, imbedded in a dense, hard mass, which fills out the pelvis on one or both sides and in the posterior fornix. Until, or unless, this exudate becomes purulent, hot douches and ice-bags are, and should be, the only resort.

It is possible, sometimes, in a rapid labor, for the lower uterine segment to tear and for a considerable hemorrhage to take place into one or the other of the broad ligaments. I have seen but three such cases in the past six years, so it is not of frequent occurrence. This hematoma may become infected, as it did in one of the cases I saw. There was the usual septic appearance of the patient and the usual phenomena of sepsis, which promptly subsided, however, upon incision and drainage of the posterior cul-de-sac.

I have now discussed the more common and a few of the rarer conditions which give rise to fever during the puerperium. They have been related entirely in a practical manner, which represents the fruit of my experience. I have purposely omitted mention of the fatal conditions, such as septic thrombosis and embolism, pyemia and septicemia, violent septic peritonitis, secondary septic endocarditis, etc., for I thought it would be more valuable to submit for consideration those phases of puerperal fever which yield to suitable treatment when the diagnosis has been made. I wish it were possible, but it is not, for me to offer any suggestion for the treatment of those violent forms of sepsis which mock at our efforts while carrying the patient to the grave. But I will say this: that the doctrine of *laissez-faire* has saved more than one woman, and the most unexpected results sometimes appear when one simply manages his case with stimulants, forced feeding, and the harmless measures of local treatment.

I have tried to give this impression: that puerperal sepsis is no single entity: it may attack any or all parts of the genital tract; the fever during the puerperium may arise in organs remote from the pelvis; no treatment can be successful which is not based upon a diagnosis of the condition that confronts the physician; simple, harmless measures of treatment are the best and the most efficacious. Above all, that man will achieve the best results in obstetrics, by avoidance of septic conditions, who, in the palace or in the hovel, goes about with an aseptic conscience.—*Amer. Journ. of Surgery.*

School Hygiene.

HEALTH LEGISLATION.

Mr. John Burns, it is understood, proposes to bring forward during the present session of the British House of Commons a bill to legalize the establishment of milk depots by local authorities to supply sterilized milk for infants. The Infants' Health Society sent an influential deputation, including among its members Sir Lauder Brunton, Sir Thomas Barlow, and Dr. Mayo Robson, to advise the President of the Local Government Board of the grave dangers (scurvy, rickets, zymotic diarrhea) which sterilized milk certainly promotes. Mr. John Burns promised to consider earnestly any united and authoritative representations made to him, and a joint committee of the Infants' Health Society, the National Health Society and the National League for Physical Improvement is now preparing such a statement, announcing their practical conclusions as to this proposal.

There can be little doubt that the attitude of the above-mentioned deputation is the right one. It is not cooked milk, but *clean milk* that we want. Once milk is contaminated, it cannot be made pure again.

Another bill now before the House of Commons is that introduced by Mr. Walter Rae, and supported by Mr. Tennant, "To make provision for Vacation Schools and for the Medical Inspection and Treatment of School Children." The clause relating to Medical Inspection, etc., is identical with the amended clause 24 of the Government Education Bill of last session, and it is hoped will receive the general support accorded to that clause. In this connection we may also mention the report of Dr. James Kerr, medical officer to the Education Committee of the London County Council. Dr. Kerr's annual reports are probably the most important documents published on school hygiene and Medical Inspection of Schools. We have here records of some 20,000 children, and extending now over three years. These records are becoming extremely valuable, and correspond with all other similar records, telling a tale of great significance to the nation. To mention only one similar record, Dr. Arkle, of Liverpool, has just published results showing that boys of seven years, belonging to well-to-do people, and attending secondary schools in Liverpool, are on an average 3.8 inches taller than boys of the same age in Liverpool attending elementary schools and belonging to the poorest class! Dr. Arkle says truly that these facts are alarming, and that unless the children are helped in some way to get proper food and to develop physically, the money spent on their "education" is wasted.

To return to Dr. Kerr's report. Dental conditions are fully dealt with. About 2 children in 1,000 use a tooth-brush, and from 90 to 97 per cent. have carious teeth. This explains the Army Recruiting Statistics in regard to teeth. Dr. Kerr does not think there is much hope of getting parents to provide tooth-brushes. He thinks tooth-brushes had better be purchased, numbered, and hung on a rack in school, each child having his own and being made to use it twice daily.

Many other topics are dealt with in this report, which ranks with State papers. We have never seen anything more striking in its way than specimens of handwriting on p. 49, the first dated March, 1905. Child's vision 6-18, showing tremor, ataxic characters and almost complete loss of alignment. Cigarette smoking acknowledged. In March, 1906 (cigarette smoking abandoned a year), vision normal, writing clear, steady, straight and pleasing.

H. MacM.

THE SECOND INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

Arrangements for this important gathering, to be held in London, at the University of London (Imperial Institute, City Technical College, South Kensington), August 5th to August 10th, 1907, are progressing rapidly, and everything seems to point to a conference that will have great and far-reaching results.

Eleven sections, dealing with every possible aspect of school hygiene, are now organized, and an exhibition of school building and furnishing appliances will be held in connection with the Congress. It is likely that Canada will be fairly well represented at the meeting, a committee having been organized about a year ago, with headquarters in Toronto, to co-operate with the General Committee in London. The Hon. Dr. Pyne, Honorary President of the Canadian Committee, will, it is thought, probably attend, and the President, Prof. Oldright, has already signified his intention of doing so. The Secretary, Mr. James L. Hughes, sails for England on March 30th, on a three months' leave of absence, and will, it is hoped, assist to represent Canada on this important occasion. Other members of the local committee who have shown special interest are Professor McPhedran, Principal Auden and Dr. C. J. C. O. Hastings, the last-named gentleman having been appointed on the committee as the representative of the Ontario Medical Association.

Full particulars and the programme of the meeting may be obtained from the Honorary Secretaries, Dr. James Kerr and Mr. E. White Wallis, Royal Sanitary Institute, Margaret St., London, W. The President of the Congress is Sir Lauder Brunton.

H. MacM.

The Canadian Journal of Medicine and Surgery

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Editorials.

DR TRIBOULET'S VIEWS OF THE CAUSES OF TUBERCULOSIS IN CANADA.

DR. TRIBOULET, delegate of the French Government to the Third Congress of French-speaking Physicians of North America, held at Three Rivers, June, 1906, expressed some views as to the causes of tuberculosis in Canada, in a paper read before the Therapeutic Society of Paris, an abstract of which appears in *La Presse*

Médicale, January 30, 1907. The author of the paper admitted that Canada had a lower mortality from tuberculosis than France, while in respect to the consumption of alcohol the former country occupied a totally different position to the latter. In Canada the consumption of alcohol is small, because the lower classes of Canadians are less tempted to drink and require alcoholic drinks less than the lower classes in France. Besides, in Canada the enforcement of the laws regulating the retail sale of alcoholic drinks is controlled by the municipalities and by license commissioners, who can lessen the sale of intoxicants by reducing the number of licenses.

In spite of this comparative freedom from the ills of alcoholism, Dr. Triboulet thinks that the Canadians pay too high a tribute to tuberculosis, owing to a high birth-rate and a bad domestic hygiene. Dwellings in Canada, he says, are large and well-lighted, but their occupants live in only one or two of the rooms. In summer windows are not opened for fear of letting in the heat; in winter doors and windows are closed to keep out the cold. Tubercular cases, he says, are economically treated at sanitaria in country places, and the results of tent life at these institutions, winter and summer, are excellent.

We have prepared the following table to show a comparison between the tubercular mortality rate of France and that of Canada:

A. D. 1901	Population.	Deaths from Tuberculosis.	Rate per 1,000.
France	38,961,955	150,000	3.84
Canada	5,371,315	9,709	1.81

In Paris, which in 1904 had a population of 2,714,068, the whole tubercular mortality was 12,178, and the rate 4.50 per 1,000.

The tubercular mortality rate of France is much higher than that of Canada. In a book, published at Paris in 1900, entitled "L'Alcohol et l'Alcoholisme," the authors, Drs. Triboulet and Mathieu, ascribed a considerable part of the tubercular mortality of France to alcoholism. Dr. Triboulet, one of the authors of that book, explains, in the paper we are now discussing, the fact that Canada has a less mortality from tuberculosis than France, by the allied fact that the consumption of alcoholic drinks in Canada is small. His remark that the lower classes in Canada get enough solid food to eat and do not require to eke out their daily bread

with wine or liquor shows that, in his opinion, food conditions in Canada are not answerable for any notable proportion of the tubercular mortality of this country.

Dr. Triboulet explains that such tribute as the Canadian does pay to tuberculosis springs from a high birth-rate and bad domestic hygiene. It may be well to note, at the start, that his remark about a high birth-rate in Canada is somewhat inexact, as that condition rightly applies to only one part of Canada, the French-speaking Province of Quebec. Our next table will show that Dr. Triboulet's contention is correct. Whether it be *per se*, from the bodily frailty of some of the children, or only as an incident due to the exposure of a relatively large number of children to infection in different centres, or from both these causes, a large birth-rate is accompanied by a relatively high tubercular mortality.

A. D. 1903	Birth Rate per 1,000	Death Rate per 1,000	Tubercular Death Rate per 1,000
Ontario	22.1	13.4	1.30
Quebec	36.75	19.6	1.74

In the tenth Annual Report of the Provincial Board of Health of Quebec, p. 51, the Recorder of Vital Statistics states: "Out of the total deaths in 1903, *viz.*, 30,914, there were 11,799 of children under 5 years, being 381 of such deaths per 1,000 deaths at all ages, nearly one-third." At page 52 he states: "The deaths from diarrhea among children under 1 year were 3,045." Diarrhea and enteritis in children are said by medical writers to be due to warm weather, childhood, improper food and bad hygiene. Some go further and hint at a tubercular taint. Thus, the Registrar-General of Ontario wrote in his report for 1900, p. 26, "That the ill-defined disease of chronic wasting in children, with usually diarrhea, may not be due to tuberculosis, but to defective assimilation of food and wasting from other causes, is quite true; but, on the other hand, that the children born ill-nourished and which fail in health almost continuously from birth have, in most instances, the taint of tuberculosis is probably much more constantly true." This last opinion coincides with Dr. Triboulet's opinion, though it leaves the impression that the young children who die of diarrhea suffer from an inherited "taint," whatever that may mean, instead of a direct infection. Although the Recorder of Vital Statistics of Quebec does not mention tuberculosis, hereditary or acquired, as an etiological factor in the mortality of young children dying

in Quebec of diarrhea and enteritis, he does acknowledge that misery and promiscuity are responsible for a large infantile mortality in that Province.

He writes: "Every year we are surprised at having to register so many deaths in early childhood. Alarm is rightly felt in the large centres, where steps have been taken to help the poorer classes to improve the precarious conditions of their existence, spent in misery and promiscuousness." As repressive measures he advises the employment of anti-diphtheric serum against diphtheria, quarantine for contagious diseases, and the disinfection of premises visited by contagious disease. All this is excellent; but something more is required if babes are to pass through the early stages of life without running great risk of catching tubercular infection, even if born in perfect health.

Prof. A. Calmette, of Lille, says ("Etiologie de la Tuberculose Infantile, *La Presse Médicale,* 26 Decembre, 1906): "The baby is contaminated with tuberculosis in *the family circle* by soiled objects, put into his mouth by himself or others. The kisses of his tubercular mother or nurse, the nurse's habit of tasting or testing the heat of the food prepared for the baby, the great amount of creeping done by the baby on the floor of the nursery, the soiled handkerchief, the rattle constantly wet with saliva—all favor the introduction of fresh, vigorous tubercular microbes into the intestines of the baby, whose powers of absorption are greater than those of the adult." One of the chief points to be attended to in the hygiene of the babe, whether it be born with a low power of resistance or be robust; whether it be a sufferer from diarrhea or not, is to remove all tubercular infection from its environment. To suffer a child to live in a badly ventilated room is to lower its power of resistance; but may be obligatory, on account of the poverty of its parents or guardians. To make it breathe air laden with dried tubercular sputa is a reproach to the hygienic authorities and a challenge to tubercular infection.

If Prof. Calmette's teachings were appreciated by every matron in Quebec, and if Dettweiler's pocket spit-cup were used by every Quebec consumptive, wherever and whenever necessary, there would be an immediate reduction in the tubercular mortality of Quebec, in spite of the high birth-rate of that Province.

Dr. Triboulet's complimentary reference to Canadian sani-

tarium treatment is gratifying to physicians in this country; but the efficient repression of tubercular infection among infants in the home, as indicated by Prof. Calmette, is of more economic importance to this country than the successful treatment of consumptives in a hospital. J. J. C.

THE ELKS' PRESENTATION TO THE WESTERN HOSPITAL, TORONTO.

On Friday evening, March 8th, the Ladies' Board of the Western Hospital were presented with $1,150 by the Elks, the result of a splendid minstrel show and concert given some weeks ago by that society in Massey Hall.

The presentation was made a bright occasion by the presence of many friends of the hospital and physicians, who had gladly responded to the invitation of the President, Dr. Augusta Stowe-Gullen, and ladies of the board.

Never has an institution in Toronto been blessed with a brighter, more energetic or better fitted complement of altruists than the brainy President and her co-workers. Beginning with a very small equipment, but plenty of resources, such as are only possessed by women of clear vision, creative ability and force of character, they set out to conquer. Even on the lines of the entertainments they organized they took David Harum's advice and "Done to others what they would have others do to them, only done it fust!" Every entertainment they have given so far has been unique and usually the first of its kind given under the india rubber name of charity. But the Western Hospital has never had the dignity of its name lowered, for the amusement arranged has always been worth the price asked for the ticket. Many remember with pleasure the Elks' concerts, and would have been charmed had they been present to see the kindly and manly way their representative presented to Dr. Augusta Stowe-Gullen a silken bag, with its lining of gold. He certainly gave it "like a Lord," and Madame Gullen received it "like a Ladye," with gracious words and an acknowledgment in the form of an illuminated expression of thanks, with deftly drawn symbols of the Order of the Elks and the insignia of the hospital. Then several physicians, who

are both witty and wise, added a few words of thanks to those whom Dr. Price Brown called "Cold-water Vegetarians"; then amid pleasant greetings, flowers and sweetmeats, everybody drank a health (in coffee), and had anyone been cavalier enough to voice the toast, we are sure it would have been "The Ladies, God bless them; the Elks and the Western Hospital," the three-fold toast of Activity, Generosity and Sympathy. W. A. Y.

COLD BATHS OR PRECORDIAL FRIGOTHERAPY.

Dr. Stephane Leduc, of Nantes, in a paper published in *La Province Medicale*, 1907, No. 1, advocates the substitution of an ice-bag placed over the heart for cold baths in the treatment of hyperpyrexia.

He has observed that an ice-bag placed over the heart produces in two hours a fall of temperature amounting to one or two degrees (Centigrade). The dangers of hyperpyrexia are obviated in this way and the heart's action becomes regular. In less than half an hour the frequency of the pulse is lessened by from fifteen to thirty beats in a minute, and the pulse beats become strong and well marked. At the same time great improvement takes place in the functions of the nerve centres, which are influenced by the ice-bag placed over the heart just as favorably as they are by cold baths.

Compared with cold baths, precordial frigotherapy has the advantage of being easily and simply applied, is not at all dangerous, and does not expose the patient to fatigue or disturbance.

To produce good therapeutic results it should be employed soon, before hyperpyrexia has accomplished its destructive work. Hence, Dr. Leduc thinks it ought to be employed in all febrile disorders as soon as the body temperature shows a tendency to remain above 102 deg. F., and the pulse to beat more frequently than 110 times a minute.

In practice, a large rubber bag, filled with ice, is fixed with a bandage over the precordial region. Ice must be kept constantly in the bag and the best way is to use two bags, one being substituted for the other, as occasion may require. A double or triple fold of flannel, placed between the patient's skin and the ice-bag,

enables the attendant to regulate the salutary action of the cold in relation to the effects produced, and which it is desirable to obtain. Thus, if the ice-bag is taken away altogether, after the febrile temperature has been reduced to a sufficiently low figure, for several days, it is not unusual to see the fever flame up again. It is preferable, therefore, to proceed step by step, and to diminish the fever-reducing effects of the ice progressively, by increasing the thickness of the flannel interposed between the ice-bag and the patient's body.

Dr. Leduc attributes this general action of cold, applied in a local manner, to the part of the body where the ice is applied. All the blood in the body passes through the heart under the ice-bag and is cooled by it. The blood goes in a cooler condition to all the bodily organs and carries the regenerating coolness to all the anatomical elements of the body, in the same way that a hot-water heating apparatus distributes heat to all parts of a house. In addition to this general action, precordial frigotherapy exercises a local effect in protecting the heart against a lesion, called by Dr. Leduc "thermic" myocarditis. According to his view, in all febrile disorders, and in proportion to the intensity of the fever, the frequently observed weakening of the heart should be attributed to an alteration in the heart muscle, directly produced by high temperature. This thermic myocarditis is probably due to the coagulation of myosin, a liquid coagulated by heat at a temperature exceeding the normal heat of the body by only a few degrees. Up to the present time, myosin has not been thoroughly studied by pathologists, who have only observed it in coagulated muscle plasma; but, in his opinion, thermic myocarditis is the cause of the syncopes and the sudden death, occurring, more frequently than has been said, in fever patients, at the moment when rising from bed they stand up on the floor. In such cases the weakened and diseased heart muscle, which has strength enough to keep the blood circulating while the body is reclining in a horizontal position, stops abruptly, as soon as the blood column, of from 60 to 80 centimetres (24 to 32 inches) above the level of the heart, falls on it "like the blow of a battering-ram."

Precordial frigotherapy, which to a certain extent is antagonistic to this thermic myocarditis, may be accepted as a means of defending the heart in febrile diseases, as much by its direct anti-

thermic effect on the heart as by the general action exhibited in the lowering of febrile temperature.

Then again, precordial frigotherapy exercises a curious effect in relation to anti-thermic medicines: It intensifies the sensibility of the diseased organism to their operation. Dr. Leduc has observed that a dose of eight grains of pyramidon, which had no influence in lowering a febrile patient's temperature, produced a rather alarming fall of temperature in the same patient when the medicine was administered after an ice-bag had been applied to the precordial region. That is to say, that precordial frigotherapy, when an antipyretic medicine is requisite to strengthen its effect, enables the attendant to considerably reduce the dose of the medicine, to the manifest advantage of the patient.

J. J. C.

DR. GRENFELL'S VISIT TO TORONTO.

Dr. Grenfell has interested the entire profession in his great work in Labrador. His lectures, with their views of the coast, its people and glimpses of what the medical missionary has done in the erection of small hospitals and in the administration of creature comforts to the sick as he and his assistants travel up and down that dreary land, few will forget. Mr. Jack Patterson, who so generously furnished the operating-room in the new Woodstock Hospital, met, very fortunately, Dr. Grenfell on the street in this city recently, and, taking him by the arm, marched him into a large instrument house, and practically said "the house is yours," and presented him with an operating table and full set of instruments.

Dr. Grenfell returns to his work in May and many a gift and kindly thought will go with him to brighten his hours in that lonely land, for years yet to be the land of "La longue Traverse."

W. A. Y.

EDITORIAL NOTES

The Greatest Men of France.—The *Petit Parisien* has taken a plebiscite on the pre-eminence of great Frenchmen of the last century. Fifteen millions of answers have been received. The winner of the contest is Louis Pasteur, the world-renowned man of science, who received 1,338,425 votes, Victor Hugo, poet and novelist, running him close with 1,227,103 votes. Gambetta follows Victor Hugo, with 1,155,672 votes. Then come Napoleon I. and Thiers, with 1,118,034 and 1,039,453 votes respectively. Lazare Carnot, organizer of the Republican armies of the Revolution, won sixth place. The order of the names that succeed Lazare Carnot's shows that the French soul to-day vibrates between the primordial patriotic concern as to the defence of French soil and its emotion of gratitude in presence of the great peaceful benefactors of the nation in science and art. The order of the names that succeed Lazare Carnot's is the proof of this statement—Curie, the discoverer of radium; Alexandre Dumas, père, who has charmed several generations of Frenchmen; Dr. Roux, the inventor of the anti-diphtheritic serum; Parmentier, the introducer of the potato into France; then Ampère, the father of dynamic electricity. The fifteenth place was won by Francis Arago, the astronomer and physicist; the twentieth by Chevreul, the chemist. The list is to be continued until 502 names have been voted on. It will certainly be gratifying to the feelings of the physicians of every nation that Louis Pasteur tops the list as the greatest Frenchman of the last century. It will be equally gratifying to all lovers of medical science to see that the names of Curie, Roux, Ampère and Chevreul are reverenced in the hearts of Frenchmen. The list of nineteenth century celebrities is not limited to the dead, for Miss Sarah Bernard's name wins the sixteenth place. Speaking generally, the idealism revealed in this plebiscite will be a revelation to many who are not familiar with the real French mind. What is England's type of greatness? With all due recognition of the greatness of the discoverer of antiseptic surgery, it is improbable that Lister's name would top the list in a plebiscite of England's worthies during the nineteenth century. That would be a stirring plebiscite, however, and we should dearly like to see it taken up by one of the great English dailies.

Views held by Drs. Calmette and Guerin as to the Intestinal Origin of Pulmonary Tuberculosis.—In a paper published in the *Annals of the Pasteur Institute,* August, 1906, No. 8, pp. 609-624, Drs. Calmette and Guerin show that pulmonary tuberculosis is of intestinal, rather than of pulmonary, origin. Different authors have shown, experimentally, that it is possible to produce tubercular lesion of the lungs in animals which have been made to swallow tubercular bacilli. On the other hand, Cornet, Nocard and Rossignol have shown by numerous experiments that the respiratory apparatus appears to be the commonest and surest route by which tubercular infection enters a living body. Drs. Calmette and Guerin proceeded to verify the fact whether dust containing tubercular bacilli is capable of penetrating into the alveoli of the lungs and starting specific lesions in them under normal conditions. In other terms, they wished to show that of two experimentally possible routes of infection—digestive and respiratory—one is practically the only one followed in preference to the other. Their experiments, made on guinea-pigs and cows, show that, when pulmonary tuberculosis by the inhalation method is experimentally realizable, the experiments call for the presence of agencies unlike those present under normal conditions: introduction of a massive dose of tubercular bacilli with the inspired air and direct introduction of the tubercular bacilli into the trachea. Moreover, they noticed that the walls of the alveoli of the lungs immediately participated in the formation of young tubercles, instead of the lesions beginning in the final ramifications of the bronchi, as most frequently occurred when tubercular infection took place spontaneously, and was always the case when it was of digestive origin. Owing to the ease with which pulmonary lesions are produced by the digestive route, through one infecting meal, containing a relatively limited amount of bacilli, the opinion held by these authors as to the extreme frequency of the origin of pulmonary tuberculosis through the digestive canal is confirmed. These researches have also enabled them to discover a rather strange fact. Several cows, after being fed simultaneously with one infecting meal, were slaughtered at different intervals. All these animals reacted by having pulmonary lesions, which healed spontaneously between the thirtieth and sixtieth days, after the one infecting meal. Therefore, animals infected once only by the digestive route with a moderate dose of virulent tubercular bacilli,

recover their health; in three months' time they do not react to tuberculin, and are really *vaccinated* against tuberculosis. On the contrary, animals fed consecutively with two or several meals of tubercular bacilli do not recover their health; their tubercular lesions get worse and evolve rapidly towards caseation. The authors contend that the deeper study of this experimental fact may lead to interesting practical deductions.

Education of the Public as to the Means of Preventing Consumption.—In the 1906 report of Dr. R. W. Bruce Smith, Inspector of Hospitals for Ontario, the following remarks on the education of the public in regard to the prevention of consumption appear: "2,877 persons died from consumption in Ontario last year. Many of these deaths might have been prevented if the people properly understood the nature of the disease and appreciated the great danger that arises from the spread of the sputum. In some cities of the United States an anti-spitting regulation is strictly enforced and a fine of $50 is imposed on any person violating the law. At the Phipps Institute, Philadelphia, where there is daily a large attendance of out-door patients in all stages of the disease, a card containing rules for the guidance of patients is issued to each person. Many thousands of these cards have been distributed and the result has been that the public is now learning the simple but effective ways by which the disease may be prevented. . . . One of the many interesting features in the work being carried on at the Phipps Institute I found was that all the nurses there were themselves former patients, who had been cured by the open-air treatment at the Pennsylvania State Sanitarium." The last statement in this quotation gives a grain of comfort to physicians who place little confidence in assurances as to the definite cure of consumptives. One remark in Dr. Smith's narrative conveys an obvious lesson to physicians, and it is this: The nurses at the Phipps Institute were wise in their own behalf in keeping up the cure of tuberculosis, of which air, rest and food are the essential features. It would be a mistake to suppose that a genuine consumptive can obtain the benefit of these curative agencies for a year or so, and afterwards return with impunity to a life of hard work, bad air, and poor food. To stay cured the consumptive must continue to lead a thoroughly hygienic life, and even though faithful to that alliance, the victory of health will be hard

to win if he is poor. Besides, the statistics of the Brompton Consumption Hospital show that the nurses and attending physicians have been exempt from tuberculosis. Perfect cleanliness in the wards, complete destruction of the deadly sputa, and you have freedom from tubercular infection in persons waiting on the sick. Such conditions are obtainable in a sanitarium. To get them, or even an approach to them, outside of a hospital, is a question which hygiene is trying to solve.

Care of Feeble-Minded Women in Ontario.—Dr. Smith also draws attention in his report to the necessity of providing a special refuge for feeble-minded girls without proper custodial protection, of whom there are at least 500 in the Province. On account of there being no other place for them, many of this class have been sent to asylums; others are kept in the refuges, among the old people. The establishment of an industrial refuge is recommended for the proper care of these girls. It is stated that in several States of the neighboring republic such institutions have been established and are now carried on successfully. It is very probable, therefore, that an institution such as that recommended will have to be established in Ontario, if for no better reason than to assist in minimizing the evils arising from a bad heredity.

The Survival of the Typhoid Bacillus, as influenced by its Presence in Waters of Different Degrees of Purity.—Dr. Savage in "Bacteriological Examination of Water Supplies," shows that the typhoid bacillus differs from the common bacillus coli and the proofs of the difference are its behavior with Widal's test and with Pfeiffer's test. The typhoid bacillus is not much changed by association with the bacillus coli and saprophytes. When introduced into water it rapidly dies; but it lives longer in a pure water than in an impure one. For instance, in unsterilized Thames River water the typhoid bacillus lived 9 days; in sterilized Thames River water, 48 days; in unsterilized Loch Katrine water, 17 to 19 days; in sterilized Loch Katrine water, 39 to 51 days; in deep well water, 33 days; in comparatively pure Lake Michigan tap water, it lived up to 7 days; in Chicago River water (impure), 3 or 4 days. The major part of the typhoid bacilli introduced into sewage-laden water perish in 3 or 4 days. Experiments made by Jordan and Russell show that typhoid bacilli exposed to the action

of flowing lake water (a spring-fed inland lake), lived 8 to 10 days; exposed to the action of sewage bacteria, 3 to 5 days. The presence of oxygen dissolved in water enables the typhoid bacillus to live longer in that water than if little or no oxygen were contained in it. Again, naked typhoid bacilli exposed in water perish more quickly than if they are mixed with feces. The three essential factors of water purification are: *sedimentation*, *diminution* of the food supply of the bacteria in the water, and *dilution* with pure water. Sedimentation is the most important means of water purification. It carries down to the bottom and sides of a river, to the bottom of a reservoir or lake, great numbers of bacteria, depriving the water of nutrient materials, the food supply of the bacteria. Jordan found sedimentation the main purifying cause in the sewage-laden waters of the Illinois River below Chicago. Twenty-five miles below Chicago the Chicago sewage was not discoverable in the river water.

Uncinariasis in Porto Rico—In a paper published in the *Military Surgeon* (January, 1907), Captain Bailey K. Ashford, United States Army, Honorary Member of the Porto Rico Anemia Commission, gives valuable data as to the causes, pathology and treatment of uncinariasis. This disease is very common among the barefoot laborers (peons) of Porto Rico, particularly those who labor on coffee plantations. As they go barefoot, the skin of their feet is exposed to the attacks of larval hookworms. Hookworms swarm in the ground of gardens and coffee plantations at Porto Rico, being expelled there in the feces of the laborers, who defecate on the ground. The larvæ of the hookworms pierce the healthy skin of the barefoot laborers, causing ground itch (mazamorra) in them. Afterwards the larvæ reach the lungs, probably by the venous system, right heart and pulmonary artery. Schaudinn, Looss and others trace the larvæ from this point up the bronchial tubes and down through the pharynx to the stomach and duodenum to their final resting place in the upper jejunum. Autopsies made by Captain Ashford showed that hookworms were found attached to the intestinal mucous membrane; several worms were removed with the bit of intestine to which they were clinging. Sections made and photographed by Dr. Gray, of the U. S. A. Medical Museum, show that the mouth capsule of the hookworm is filled with denuded submucosa, and its intestine with columnar

epithelial cells in various stages of degeneration. The lesions met with clinically were: (1) Probably a damaged kidney; (2) a catarrhal inflammation of the upper jejunum and often of the duodenum, with very superficial erosions, but not ulcers; (3) a weakened heart; (4) a more or less profound secondary anemia, which may take on all the characteristics of an essential anemia, so far as we know them, and prove fatal, even after the expulsion of all uncinaria; (5) fatty infiltration and degeneration of the liver in severe cases. The most efficient vermicides were thymol and beta-naphthol. The administration of either of them once a week was sufficient. The dose of thymol is not given; the dose of beta-naphthol should never exceed two grams. After the first dose thymol expelled 76.85 per cent. of the total number harbored; beta-naphthol, 72.34 per cent. After the fifth dose of thymol 99.79 per cent. had been expelled; after the fifth dose of beta-naphthol, 98.73 per cent. In recognition of the scientific, clinical and educative work done by the Anemia Commission, the Legislature of Porto Rico in 1906 appointed a permanent Anemia Commission, and provided a grant of $50,000 for their work.

J. J. C.

PERSONALS.

The *Indian Lancet,* Calcutta, a weekly journal of medicine, published January 7, 1907, Dr. Cassidy's article on "Yellow Fever," originally published in *C. J. M. S.,* October, 1905.

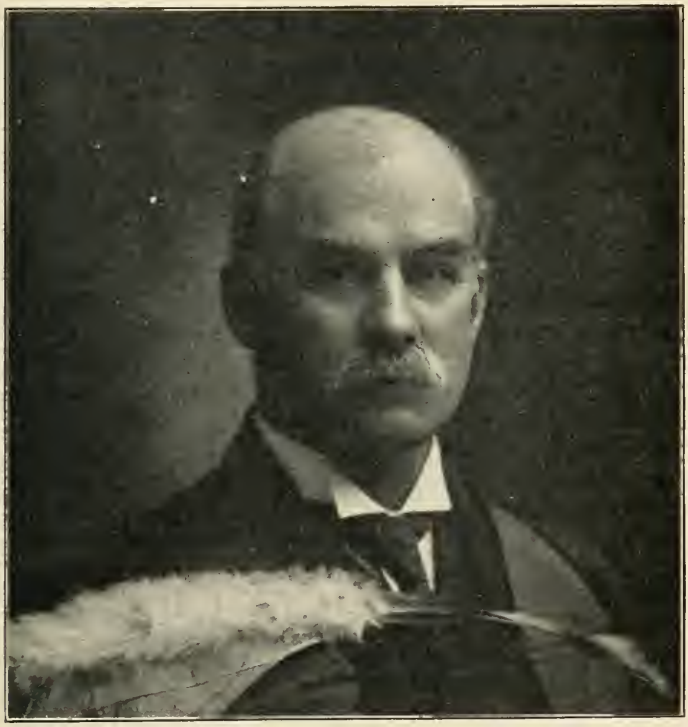
Dr. George Elliott, Editor of *The Dominion Medical Monthly,* has the sympathy of the entire profession in Toronto for the unspeakably sad and sudden bereavement that befell him in the death of his beloved wife early in March.

Erratum.—In editorial note, "The Mortality of Paris during the Nineteenth Century," *C. J. M. S.*, March, p. 175, "4.56 per cent." (fifth line from the bottom of the page) should be "4.56 per 1,000."

Obituary

PROF. GEORGE A. PETERS, M.B. (TOR.), F.R.C.S. (ENG.).

In the untimely death of Professor Peters on the 13th of March the profession of the Province lost one of its most brilliant ornaments, the University of Toronto one of her worthiest and most distinguished sons, and her Medical Faculty one of the sanest, most useful and most indispensable teachers. His knowledge as



THE LATE PROF. GEORGE A. PETERS, M.B. (TOR.), F.R.C.S. (ENG.

a physician, his skill as a surgeon, his mechanical ingenuity, his readiness and resourcefulness in emergency, were well known to all; but it was reserved for his intimates and familiars to realize to the full the probity of his life, the integrity of his character, his amiability and affectionate disposition, the true value of

his example, and the influence upon his environment of his scathing scorn for all that was sordid, mean and low. A bare narration of the salient points of his career will suffice to point the moral of a life well spent, to adorn the tale of more than ordinary accomplishment.

Born in the Township of Eramosa in the County of Wellington, near the Village of Fergus, on the 16th of July, 1859, he was early thrown upon his own resources by the successive deaths of his mother, father and stepmother, so that at the age of 13 or 14 years he found himself obliged to earn not only his own living, but to contribute to the support of two half-brothers and a half-sister as well. How he succeeded in this Herculean task, is sufficiently attested by the fact that they all acquired a High School education, and that the three boys graduated in medicine from the University of Toronto. But the strenuous toil of days behind the plough and in the harvest field, when the adolescent nervous system was providing the energy for the labor of an adult, and the much-burning of the student's midnight oil, doubtless laid the foundations of those vascular degenerations, which two years before the end revealed themselves in the attacks of angina pectoris, to which he ultimately succumbed. It was his good fortune during his High School course to come under the teaching (by both precept and example) of Dr. John Seath, the present Superintendent of Education, and he often gratefully alluded to this fact. His course in the University was brilliantly successful, and he graduated with honors and the Starr gold medal in 1886.

After a year's residence as *interne* in the Toronto General Hospital, during some months of which the duties of Medical Superintendent devolved upon him, and spending some time as a demonstrator of anatomy in the University of Toronto, he went to England, where, after a few weeks, he took the primary examination for the Fellowship of the Royal College of Surgeons, and six months later the final, an unprecedented accomplishment for a Canadian still without a parallel.

Returning to Canada, he began to devote himself more particularly to the surgical work of his profession, but it was not until 1900 that he concentrated his entire attention upon it, and soon forged ahead to the front rank of operating surgeons, his wide and accurate knowledge of anatomy, his mechanical ingenuity and skill, and a confidence born of an innate sense of power, conspiring to make supremacy easy to him. At the same time, the instinct of the teacher (doctor) which from practice had largely developed before his entrance into medicine, received a new awakening and impetus, and it was speedily acknowledged that he possessed in a very high degree that Divinus Afflatus which

enables one to reflect the rays of one's own knowledge into the dark places of others' intellects.

These two considerations alone, quite apart from the inestimable value of his association as a man, colleague and counsellor, oppress the members of the Medical Faculty at the present moment with a sense of irreparable loss.

The teaching of clinical surgery naturally followed upon the teaching of anatomy, and was pursued with ever-increasing success, and when, at the time of the amalgamation of the Medical Faculties in the University, it was deemed expedient for the purposes of the amalgamation to make the Chair of Surgery temporarily a quadripartite one, his eminence and success as a surgeon led to his appointment to the chair. Unhappily, the failure of his health prevented his exercising his great powers in that behalf to their full extent, but up till the end he discharged his duties with a zeal, ability and force which impressed his character deeply upon the minds of his students, to whom, though dead, he yet shall speak "while Memory holds her seat."

His surgical alertness and inventiveness were attested by his various modifications of the usual operations of plastic surgery (in which he excelled), by the coat-sleeve amputation of the appendix, which he was the first to do, by the transplantation of the ureters into the rectum in cases of ectopia vesicæ, which he made his own, and by his method of proctoplasty and suspension in cases of procidentia recti. His mechanical ingenuity was shown by his modification of Aikins's splint for fracture of the upper arm, his wrench for clubfoot, his device for making plaster casts of the living head and neck by a preliminary spray of paraffin, and last, but not least, by his wonderful self-registering electric target for rifle-shooting, which, it is to be hoped, the profession will use their united influence to have very generally adopted as a memorial to the man and a source of revenue to those who were dependent on him.

Although a busy man he nevertheless found time for recreation and amusement, his chief pastimes being golf, riding, driving and hunting. His love of the horse was one of his strongest characteristics, and his mastery of that noble animal complete. No gentler hand or firmer seat could be found in the Toronto Hunt, or, perhaps, elsewhere. He had strong military instincts, and, of course, upon the cavalry side. He entered the Governor-General's Body Guard as a lieutenant and attained his Majority. After the Boer war he was selected to organize a regiment of Mounted Rifles—now "The Toronto Light Horse"—to exploit Boer tactics, and this corps he continued to command up till the present winter.

His literary style was good and pure. He was not a voluminous writer, but he contributed the articles on the "Surgery of

the Rectum and Anus" to the "International Text-book of Surgery," by Gould and Warren, and the article on the "Inflammatory Affections of Bone," to the forthcoming "System of Surgery," by Bryant and Bucke.

His last paper was on the "Choice of Operation in the Surgery of the Gall Bladder," which was read before the Clinical Society a month ago, and was pronounced by those who had the privilege of hearing it a unique production and most luminous presentation of the subject.

He was fond of music and of reading, but the only poetry the writer ever heard him quote was the "Lady of the Lake," and it was natural, therefore, that as his coffin was lowered to the ground to await the parting salute of his comrades-in-arms, for his funeral was a military one, the thought should surge into the mind that the lullaby of Ellen Douglas was his fitting requiem, and Duneraggan's Coronach our appropriate dirge.

The foregoing sketch makes it abundantly apparent how great a loss the community has sustained in Professor Peters' premature demise. But, if the general loss be great, what shall be thought of those who mourn in addition the devoted husband, the fond father, the faithful friend, the sagacious counsellor, the unfailing colleague? To one and all of these the heartfelt sympathy of the profession goes out in unstinted measure. And there should be consolation in the thought that of him who walked among them it may be said in truth that

> "His life was gentle and the elements
> So mixed in him that Nature might stand up
> And say to all the world 'This was a man!'"

He rests from his labors and his works do follow him. *R. I. P.*

I. H. C.

THE LATE DR. ORONHYATEKHA.
Vide 256.

ORONHYATEKHA, M.D. (TOR.) AUGUST 10, 1841—MARCH 2, 1907.

Dr. Oronhyatekha, former Chief of the Mohawk Indians, Supreme Chief Ranger of the Independent Order of Foresters, died at the Desoto Hotel, Savannah, Georgia, March 2nd, 1907. He had long suffered from an affection of the heart and the fatal termination was not unexpected. Oronhyatekha belonged to the Six Nation Indians in Canada, and was born on their reservation, near Brantford, Ont., Aug. 10, 1841.

His English education was begun at the Industrial School there and continued at the Wesleyan Academy at Wilbraham, Mass. His college education was begun at Kenyon College, Ohio, where he studied for three years. He also studied for a year or so at Oxford, and spent three years studying medicine at the Toronto School of Medicine. He graduated M.D. (Tor.), in 1866. He commenced practice at Frankford, Ont., but afterwards removed to London. It was while living there that he joined the Independent Order of Foresters. He rose rapidly to the position of Chief Executive of the order and at the time of the separation, 1881, he was elected to the office of Supreme Chief Ranger, which he held with much success up to the time of his death.

Oronhyatekha leaves one son, Dr. Acland Oronhyatekha, and a daughter, Mrs. Percy Johnston, of Deseronto. Interment took place at the Mohawk Reserve, near Deseronto, March 8, 1907.

"A rare fellow-man."—*Sir Hy. W. Acland.*

News of the Month.

CHANGES AT GRAVENHURST SANATORIUM.

Changes in the medical staff of the Muskoka Cottage Sanatorium, made necessary by the resignation of Dr. J. H. Elliott, Physician-in-charge, are now in the making. Secretary J. S. Robertson announces that Dr. Dobbie, for some time in charge of the hospital at Weston, will assume the post. Dr. Elliott will spend the summer in foreign study and then practice as a consulting physician on tuberculosis in Toronto.

It has been under Dr. Elliott that the original pioneer work in the fight against consumption has been accomplished in Canada, until now the two hospitals on the rock-ribbed shores are as famous as the Muskoka lakes themselves.

Dr. Elliott, the gold medallist of his class, came from Toronto University in 1897, after some months' research work in physiology in the George Brown Memorial Scholarship. The year 1900 the doctor spent in Europe, six months among the sanatoria of Germany and Austria, and six months with the malaria expedition sent under the auspices of the Colonial Office to the Niger delta, West Africa. His associates in this important undertaking were Drs. Dutton and Annett, of Liverpool, the latter having formerly been at Berlin with Dr. Koch, the discoverer of the tuberculosis germ. Dr. Elliott has figured prominently at all the medical congresses of recent years in the United States, but has steadily declined to accept positions of trust as a tuberculosis expert in both university and new sanatoria practice across the line.

Dr. Elliott was born in West Durham thirty-four years ago, receiving his early schooling at Bowmanville. He was the winner of three scholarships at matriculation. Unlike Dr. Trudeau, of Saranac, N.Y., and other well-known friends who are searching for new knowledge, Dr. Elliott is not a "cure" from the white plague.

Dr. W. J. Dobbie, the new physician-in-charge, is well qualified for his new responsibilities. He is a gold medallist of Trinity University, is a graduate also in arts of Toronto University, and for two years has been in charge of the hospital at Weston.

Miss Dickson, head nurse at Weston for some time, has been appointed lady superintendent of the Sanatorium.

A NIGHT WITH THE STUDENTS.

On Wednesday night, February 26th, the class of 1907 in Medicine held their graduating dinner at the St. Charles Hotel. The function was a grand success and enjoyed by a large representation from the faculty and 125 students. The menu card was most elaborate and abounded with witty quotations and clever cartoons. The following quotation was used with reference to freshmen: "Alas, regardless of their doom, the victims play; no sense have they of ills to come nor care beyond to-day." The toasts were especially good. Professor A. B. Macallum referred to Toronto University as the third biggest university in the Empire, and said that it was the most liberally supported. In the next five years, he said, it will receive one million dollars. Dr. Allan Baines responded to the toast to the hospitals. He said that the clinical facilities in Toronto hospitals were excellent. Mr. Hurlburt proposed a toast to the Medical Council, and said a Dominion Council should be formed so that an Ontario physician could practice in any province, without undergoing another provincial examination. Professor Primrose said he considered himself the first friend of every medical student, because his position as secretary gave him opportunity of first becoming acquainted with the boys. Besides the speeches, there were college songs rendered by the students. The toast list was as follows: "King and Empire," W. C. Shier and Dr. Charles Sheard; "Dominion Parliament," J. W. Hunt and G. Norman; "Provincial Parliament," Messrs. McVicar and Young; "University of Toronto," Mr. Connor and Professors Cameron and Primrose; "Hospitals," Mr. McNicol and Prof. Allan Baines; "Medical Faculty," Mr. A. Huntsman and Professors Reeve and McPhedran; "Medical Council," Messrs. Brydon and Hurlburt; "Our Guests," G. C. Grey and Prof. A. B. Macallum; "Undergraduates," Messrs. Wright, Mulholland, Charles Johnston, Wilson; "Ladies," Messrs. Racey and J. A. Whillans. Mr. W. C. Shier, B.A., acted as toastmaster.

IDEAS TO BE OBTAINED FROM AMERICAN INSTITUTIONS FOR THE NEW HOSPITAL.

Messrs. M. J. Haney, Chairman of the Committee of the new General Hospital; Darling & Pearson, the architects; Prof. A. B. Macallum, a member of the Hospital Board, and Dr. J. N. E. Brown, Superintendent of the Hospital, went recently to New York, Baltimore, Philadelphia and Washington. They were accompanied, on the instructions of the Provincial Secretary, by

Dr. Bruce Smith, the Provincial Inspector of Hospitals and Charities. At the cities named they will visit most of the leading hospitals, and particularly those recently erected, with a view to getting all possible information which would be of assistance in building the new hospital in this city.

The time for commencing the building of the new hospital will not, it is thought, be long delayed. Excellent progress has been made in securing agreements for the expropriation of properties upon the selected site. These are said to be valued at somewhat over $600,000, and agreements covering property with an aggregate value of $500,000 are understood to have been reached without a single case having to be referred to arbitration. The site has a frontage on College Street from Elizabeth to University Avenue, and runs some distance south into "the ward."

In addition to its interests by reason of a grant to the project and the connecting link of the Medical College of the University, the Government has another indirect tie with the new hospital project, namely, the decision for the establishment of a Provincial Veterinary College. It is said that if the present scheme, which contemplates the purchase of the Veterinary College on Temperance Street, goes through, a building will not be erected on the University grounds for Veterinary College purposes, as was originally intended, until the new hospital is nearly completed. The reason for this is that several of the courses of veterinary and medical students are alike, and it would be helpful to have the buildings, Veterinary College, Medical College and new hospital, where some special classes will be held in close proximity. In the event of the successful issue of the negotiations for the purchase of the present Veterinary College the existing building would be utilized until the new one is ready.

AN INTERESTING SUIT FOR MALPRACTICE.

Dr. George Clingan, who formerly practised on College Street in Toronto, and who is now living in Brandon, Manitoba, was called into court recently by a contractor whom he had attended professionally because of a fracture of his left tibia, which occurred by a fall from the sidewalk. After adjustment of the fracture, Dr. Clingan placed the leg in a circular splint of plaster-of-Paris. During the course of treatment doctors both at Virden and Brandon were called in consultation. Contrary to the advice of his attending surgeon, the contractor, McDougall, began to use the injured limb, and eventually he gave up crutches and all protection for the injured limb without consulting his attendant.

The fracture had occurred January 29th, 1906. About the 1st of December, 1906, McDougall issued a statement of claim against Dr. Clingan for the sum of $2,000 for malpractice, asserting that the leg was permanently injured and that he had constant pain as a result of the unskilfulness and improper treatment carried out.

About twenty witnesses were called, including all the doctors of Virden, Drs. Chown and Galloway, of Winnipeg, and Dr. McDonald, of Brandon. There was very general agreement among the medical men with the treatment adopted by Dr. Clingan. Three medical men had been summoned by the defence, but were not called, counsel for the defence stating that he would not submit further expert testimony.

Mr. Justice McDonald charged very directly and strongly in favor of the surgeon, saying that he was quite convinced that the defendant exercised proper judgment in using the plaster-of-Paris, and that the precaution given to the plaintiff about too early use of the limb was justifiable, but had not been observed by the plaintiff. The Judge said: "I fail to see a trace of any evidence of neglect or want of skill on the part of the defendant. The evidence impresses me altogether the other way. I think the defendant had used all possible skill and every possible care any reasonable surgeon would. That he is a careful man we can see, and that he is competent we can see from his evidence, and I think he has exercised every possible care in this case." Further, "I have no hesitation in finding that the defendant was not guilty of any neglect of skill; in fact, I believe he was skilful in his treatment, and I dismiss the action with costs and enter a verdict for the defendant on his counter-claim as sued for."

THE WORK OF A TORONTO PHYSICIAN IN THE CAPITAL OF KOREA.

Wm. T. Ellis, writing from Seoul, Korea, to a syndicate of papers, says, in part:

"Here it is noteworthy that the missionaries constitute the dominant Anglo-Saxon community. There are at this capital more missionaries than all other white foreigners combined. Because of their homogeneousness, as well as because of their activity and long residence, they are the best known to the Koreans. While there is a small and not very closely-knit consular set, and a business set, as in other capitals, they rank after the missionary set, and, in fact, are in more intimate relations with it than usual.

"A missionary physician is the doctor of the white com-

munity. This is Dr. O. R. Avison, head of the Severance Memorial Hospital, which is spoken of in Seoul as 'the hospital,' though the Methodists also conduct a busy and successful hospital here. There is no lack of work for the medical missionary in Korea. The Severance Hospital, which is the gift of Louis N. Severance, a well-known Presbyterian layman of Cleveland, Ohio, is built and equipped on the lines of a first-class American hospital. Its patients include the best people in Seoul, and Dr. Avison is physician to his Majesty.

"The King recently made a gift of $1,500 to the hospital, and another of like amount to Dr. Avison himself. The latter has been through dramatic and bloody scenes at the Korean court, but always as a personal friend of the Emperor; he says that he and the Emperor never talk politics. Associated with Dr. Avison, who is a Canadian, is Dr. J. W. Hirst, of Philadelphia, and these, with a trained nurse, Miss E. L. Shields, of Lewisburg, Pa., constitute the responsible heads of the hospital.

"In connection with his hospital duties, Dr. Avison conducts a medical college. He is having translated into Korean, and mimeographed, a complete set of modern medical text-books; and his ambition is to turn out a set of competent native physicians who can, with the literature thus at their command, build up a Korean modern medical profession along up-to-date lines. With such an ambition as this, a man is not to be blamed for working far into the night, as Dr. Avison does."

Dr. Avison is a Torontonian, and lived in Carlton Street until about eighteen years ago.

THE ONTARIO MEDICAL ASSOCIATION.

The provisional programme for the coming meeting has been issued to the profession of the Province. It should prove of interest to every practitioner. Of special moment will be the address in medicine by Dr. Mazyck P. Ravenel, of the Phipps Institute, Philadelphia, on "The Methods of Infection in Pulmonary Tuberculosis," and the address in surgery by Dr. George W. Crile, Professor of Clinical Surgery, Medical Department, Western Reserve University, Cleveland, dealing with "Clinical and Experimental Obesrvations on the Direct Transfusion of Blood."

The committee also have invited Dr. William Milligan, of Manchester, ex-President of the British Laryngological and Rhinological Association, and Professor Gustave Killian, of Freiburg, Germany, who will be the guests of the American Medical Association a few days later at Atlantic City. Symposia upon

"The Profession in relation to the Public" and on "Fractures" will open discussions of interest, beside which the programme of papers promises many important topics for consideration.

A smoking concert and a dinner are items in the programme under the care of the Committee on Arrangements.

The meeting will be held in the Medical Building, Queen's Park, on the 28th, 29th and 30th of May next.

THE ACADEMY OF MEDICINE, TORONTO.

The organization of the "Academy of Medicine, Toronto," is practically completed, after an agitation extending over a number of years.

The new association will have its headquarters in the building of the Ontario Medical Library Association, in Queen's Park, but plans have been made to raise a sum of money among the members of the profession in Toronto, and an auditorium and stock room will be erected.

The Library Association is the main nucleus, but there will be three other societies amalgamated with it—the Toronto Medical, Clinical and Pathological Societies. These three will go out of existence, and will meet now as sections of the Academy.

An impetus was given to the new association by the convention of the British Medical Association last summer, and also by an address to the different societies by Dr. Wm. Osler in December last. This is the first Academy to be formed in Canada.

The object is thus set forth: "The advancement of the art and science of medicine with its collateral branches, the promotion and maintenance of an efficient library and museum; professional improvement; the cultivation of harmony and good feeling among the Fellows, and the promotion of the corporate influence of the profession in its relation to the community."

The Academy will be managed by a council of twelve. The first one will be composed of the officials of the Library Association and the president and secretary of the other three societies. These will choose their own officers. Succeeding councils will be composed of nineteen members.

Besides the ordinary members, there will be resident and non-resident Fellows.

The Ontario Library Association was formed in 1887, and met in the Medical Council building until two years ago, when it purchased the residence of Mr. Horace Thorn in Queen's Park. This contains fifteen rooms.

The addition that will be built will be used chiefly as a fire-

proof library and an auditorium. Refreshment rooms will also be fitted up, and other club rooms.

The officers of the four societies are:

Ontario Medical Library Association—President, Dr. J. F. W. Ross; Vice-President, Dr. Alex. McPhedran; Secretary, Dr. H. J. Hamilton; Treasurer, Dr. D. J. Gibb Wishart.

Medical Society—President, Dr. Rudolf; Clinical Society, President, Dr. H. B. Anderson; Pathological, Dr. J. A. Amyot.

ITEMS OF INTEREST.

Doctors' Bill in Quebec.—Christian Science healers, osteopaths and every person practicing the art of healing, who is not a regular member of the College of Physicians and Surgeons of the Province of Quebec, will in the future be liable to a fine of from $25 to $100 for every offence. At least this is the effect of a provision in the next bill affecting the College of Physicians and Surgeons, which has already passed its second reading in the Assembly. It was approved by a special committee to which it had been referred.

Reed & Carnrick, Jersey City, N.J., beg to announce that Dr. W. von Riedl, of the University of Berlin, former assistant in the Laboratories of Professor Koch and Virchow and late first assistant to the department of medicine in the University of Heidelberg, has been appointed Pathological chemist and chief of their Pathological and Bacteriological Laboratories. Dr. W. von Riedl brings the latest thoughts and researches of the German laboratories, so that doubtless the same high standard of this firm's laboratories will be maintained as in the past.

The Physician's Library.

BOOK REVIEWS.

Surgery: Its Principles and Practice. In five volumes. By sixty-six eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Vol. I.: Octavo of 983 pages, with 261 text-illustrations and 17 colored plates. Philadelphia and London: W. B. Saunders Company. 1906. Per volume: Cloth, $7.00 net; half morocco, $8.00 net. Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

"Keen's Surgery" is a collection of monographs, written by well-known authors on the different subjects which go to make up the "Principles and Practice of Surgery," the whole work being edited by Dr. Keen. The "Narrative of Surgery," an historical sketch, by Dr. Mumford, Boston, of ancient, mediæval and modern princes of surgery, is a very readable essay, and one which adds to the value of the work. In "Surgical Physiology," Dr. Crile, Cleveland, Ohio, deals largely with the instrumental estimation of blood pressure.

The examination of the blood, particularly in relation to hemoglobin values, leukocyte count, iodophilia, time of coagulation, bacteriemia and cryoscopy, is dealt with in the third chapter by Dr. John C. DaCosta, jun. Dr. L. Hektoen writes the chapter on "Infection and Immunity." A pregnant sentence in his essay is worth repeating: "It is at present accepted quite generally that the inflammatory reaction, resulting, as it does, in the concentration of leukocytes and of serum about the organisms, serves to protect the body and to promote healing."

Dr. Adami, Professor of Pathology in the medical faculty of McGill University, Montreal, writes the chapter on "Inflammation," which impresses one as a philosophic and well-written article. He devotes a good deal of attention to Bier's method of employing passive congestion to counteract acute disturbances in cases of what are called inadequate reaction. He favors the application of cold in superficial inflammations of a non-infective character; warmth in the treatment of parts infected with pyogenic organisms.

"Suppuration, Abscess and Fistula" are described by Dr.

Freeman, Denver, in an eminently practical way. The same author also treats of ulcers, ulceration and gangrene.

"The Process of Repair" is a chapter which cost its builder, Dr. Wood, New York, an immense amount of research, for its bibliography covers nearly four pages.

Dr. Frazier, Philadelphia, writes an interesting article on "Thrombosis and Embolism." He also describes erysipelas, tetanus, anthrax, glanders, actinomycosis, malignant edema, hydrophobia, bites and stings of insects and bites of serpents.

Dr. Eugene A. Smith, Buffalo, deals very ably with "Traumatic Fevers." The article on "Scurvy," by Dr. Frazier, though this subject is not of great surgical interest, shows careful treatment. The same remark applies to the article on "Rickets," by Dr. Nichols, Boston.

Dr. Chalmers Da Costa, Philadelphia, writes in an authoritative way on "Surgical Tuberculosis." Much in his article is inevitably trite. He approves of the Finsen light, the X-rays, and tuberculin in lupus. He approves of Bier's method in tuberculosis of the joints.

Dr. Edward Martin, Philadelphia, contributes an excellent chapter on "Chancroid and Syphilis."

The chapter on "Tumors," by Mr. Bland-Sutton, occupies fifteen pages. Among the important matters discussed in it are the various theories of the causation of cancer.

A chapter on "Wounds and Contusions," with a discussion on "Shock and Collapse," is written by Dr. Crile, and ends the volume.

Dr. Keen has chosen his workmen with discernment and they have nobly responded to his call. Where all have done well, it is hard to individualize. Although at first unfavorably impressed by the plan of writing a great work in monographs, the result, as far as one can judge by the first volume of "Keen's Surgery," is satisfying. Dr. Keen deserves warm commendation for the success of his enterprise. If it be a case of *ex uno disce omnes*, the subsequent volumes of the set will be looked for with avidity and read with pleasure.

In print, illustration and binding, the work is a finished production. J. J. C.

A Treatise on Orthopedic Surgery. By Royal Whitman, M.D., Clinical Lecturer and Instructor in Orthopedic Surgery, etc., New York. Third edition. New York: Lea Bros.

The fact that the third edition is so soon called for goes to show not only a cordial appreciation of this work by the profession, but also that the subject dealt with is a rapidly growing one. Although the general practitioner may not be brought face

to face with the fact, yet it is true that nowhere in the field of medical science has greater advance been made in recent years than in orthopedic surgery. In common with all departments of medicine, orthopedic surgery felt the thrill that went through the body medical as the result of the labors of Pasteur, Koch, Virchow and Lister.

The practical beneficence of science in removing the distress, suffering and humiliation of the unfortunate is nowhere shown more plainly than when the unsightly deformity is removed, or the disabled member is restored to its former activity. Perhaps the most distinctive advantages, however, are seen in the means employed to prevent deformity. A closer study has been made of the mechanical principles involved in the action and inter-action of the various parts of the human mechanism, resulting in the employment of simpler and more efficient means to help the patient individually to approximate the physical ideal.

The author gives his readers full advantage of his own large experience in dealing with the many phases of the work as seen in large metropolitan hospitals, and in association with men who are acknowledged leaders in the profession. The methods of treatment recommended do not set forth so much the historical, and perhaps discarded, practice of the past, as the methods which are the logical outcome of modern knowledge.

The work is splendidly illustrated, and the numerous headings and sub-headings in heavy type greatly aid ready reference. The book in all particulars is worthy of commendation, and will not be one of the unused so often found on the shelves of the busy practitioner. B. E. M.

Rhythmotherapy. A Discussion of the Physiologic Basis and Therapeutic Potency of Mechano-Vital Vibration, to which is added a Dictionary of Diseases, with suggestions as to the technic of Vibratory Therapeutics, with illustrations. By Samuel S. Wallian, A.M., M.D., President American Medico-Pharmaceutical League, ex-President Medical Association of Northern New York, Member New York State and County Medical Societies, Fellow of the American Electro-Therapeutic Association, Member Medico-Legal Society, Associate Editor Medico-Pharmaceutical Journal, etc. Chicago: The Ouellette Press. 1906. Price, $1.50 net; postage, 10 cents.

This handsome volume of over two hundred pages is the most recent, and in many respects the most satisfactory contribution to the literature of the subject yet produced.

The busy practitioner, whether using a vibrator or not, will find many valuable suggestions within its covers, and the entire

subject treated from the logical and physiological aspects without a long prelude, historical mention, or description of vibrators.

A chapter is devoted to a "Digression on Diet," of value to every physician, and the "Dictionary of Diseases" is a very complete statement of the technic of vibratory treatment.

The illustrations are unusually fine and two colored charts are included.

The Treasure of Heaven. By Marie Corelli. Toronto: William Briggs.

Everything Marie Corelli has written is worth reading. Yet even her warmest admirers of yester year are bound in truth to say that she is now using stories as pegs to hang deep-rooted prejudices upon, and so, while just, she is hardly generous. This little story is simple in construction and fresh with the breath of Old England's roses and its countryside, but sombre with the gravity of the sad, empty heart of a millionaire who ever craves and seeks "The Treasure of Heaven"—Love.

A pleasing photogravure of the authoress adorns the frontispiece of the novel, an unusual condescension upon her part, is it not? W. A. Y.

A Text-book of the Practice of Medicine. For Students and Practitioners. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Physician to the Jefferson Medical College Hospital, Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London; author of "A Text-book of Practical Therapeutics," "A Text-book of Practical Diagnosis," etc. In one very handsome octavo volume of 1120 pages, with 131 engravings and 11 full-page plates in colors and monochrome. Second edition, revised and enlarged. Cloth, $5.00 net; leather, $6.00 net; half morocco, $6.50 net. Philadelphia and New York: Lea Bros. & Co. 1907.

One of the most uncommon and highly valuable mental faculties is judgment of relative importance, an ability to conceive ideas distinctly enough to measure them, and to picture them in their proper perspective. Such a faculty collects, arranges, sorts, drops what is unimportant, and seizes what is essential. Clear vision is clear thought, which finds its expression in clear language. Such qualities embodied in a book account for keen public appreciation, and this is the explanation of the fact that two very large printings and now a thoroughly revised edition of "Hare's Practice" have been demanded in less than two years. The author has written for medical students of all ages. He knows the needs of the undergraduate and the best mode of presenting

a subject to his mind by reason of the fact that he has been teaching clinical medicine and therapeutics for nearly a quarter of a century, and the same length of active hospital and private practice gives the weight of experience which attracts the physician in need of counsel. Well-proportioned consideration is given to the theory and principles of medicine as underlying, explaining and leading up to the main objective point, namely, the practical application of the knowledge. Accordingly, particular pains have been taken to present methods of treatment clearly, and in such a way that they may be put directly into practice. Such have been the characteristics of the work from its original issue. In this new edition every line has been revised, anything already rendered obsolete by the rapid march of medicine has been eliminated, and all trustworthy advances have been incorporated, so that the volume, as it stands, is representative of its subject to date. Of its authority and resourcefulness, nothing need be said.

The Practical Medicine Series, comprising ten volumes of the year's progress in medicine and surgery. Under the general charge of Gustavus P. Head, M.D. Volume X.—"Skin and Venereal Diseases," "Nervous and Mental Diseases." Edited by W. L. Baum, M.D., Hugh T. Patrick, M.D., William Healy, A.B., M.D. Chicago: The Year Book Publishers, 40 Dearborn Street.

In this volume the physician has a ready review of the very latest observations of prominent men in the various branches of skin, venereal, nervous and mental diseases. The chapter on "Actinotherapy and Radiotherapy" is especially interesting, as the beneficial effects of treatment are noted, as well as the dangers carefully considered. The authors have selected the important items of the medical literature of the year and present them in such a manner that the busy physician cannot fail to appreciate them.

D. K. S.

The University Magazine. The Macmillan Company.

A quarterly magazine, whose aim has been set forth thus: "To express an educated opinion upon questions immediately concerning Canada; to treat freely in a literary way all matters, especially those which have to do with politics, industry, philosophy, science and art." The subscription price is one dollar a year, single copies twenty-five cents. The number for February contains many well-written, concrete articles, deeply interesting to those studiously inclined; there is nothing in "lighter vein," so the author in no way caters for cheap popularity. In quantity of matter he has been certainly "generously good."

W. A. Y.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. III.—Earth Burial to Gummi Indicum. Edinburgh and London: Wm. Green & Sons.

Volume III. has followed Vol. II. in rapid succession and completes, so the publishers tell us, nearly one-third of the whole work. In this section there are 1,097 subject headings and over sixty articles of more than 1,000 words in length. Among these articles are included contributions to the subjects of Epilepsy, Epistaxis, Electrolysis, Enemata, Eczema, Ectopic Gestation, Eclampsia, Filariasis, Glaucoma, Glandular Fever, Gangrene, Gastro-intestinal Disorders of Infancy, Gout, Foot and Mouth Disease, Facial Paralysis, Fallopian Tubes, The Female Organs of Generation and their Arrested Development, and many others. Many of these articles appeared originally in "The Encyclopedia Medica," though the majority of them have been thoroughly revised and brought up-to-date. Volume III. is perhaps the best that has as yet appeared. The cross references are a splendid feature of the work. W. A. Y.

The Practical Medicine Series. Comprising the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VIII.—Materia Medica and Therapeutics, Preventive Medicine, Climatology and Forensic Medicine. Edited by George F. Butler, Ph.G., M.D., Henry B. Favill, A.B., M.D., Norman Bridge, A.M., M.D., Daniel R. Brower, A.M., M.D., LL.D., and Harold N. Moyer, M.D. Series 1906. Chicago: The Year Book Publishing Co., 40 Dearborn St.

"The Practical Medicine Series of Year Books" are published in ten volumes, and are designed especially for the general practitioner. Each volume is edited by a specialist in his particular department, who is, because of the division of labor, able to cover the vast amount of literature necessary for the work.

We have found this series of great practical value. Any subject can be looked up quickly, and one finds the year's work on that subject carefully abstracted and in convenient form for reference.

The present volume, No. VIII., contains 358 pages, including the index. 207 pages are devoted to materia medica and therapeutics, 78 to preventive medicine, 36 to climatology, and 37 to forensic medicine and index.

This volume is fully up to the high standard of the series.

The work is sold either in the full series or in single volumes, to suit the individual requirements. W. J. W.

Text-Book of Anatomy for Nurses. By Elizabeth R. Bundy, M.D., Member of the Medical Staff of the Woman's Hospital of Philadelphia; Gynecologist, New Jersey Training School, Vineland; late Adjunct Professor of Anatomy and Demonstrator of Anatomy in the Woman's Medical College of Pennsylvania; formerly Superintendent of Connecticut Training School for Nurses, New Haven. With a glossary and 191 illustrations, 34 of which are printed in colors. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1906.

That an accurate knowledge of the anatomy of the human body must form the basis of a nurse's training for her life's work, there is no question. It was no simple task for anyone to attempt to take so large a subject as human anatomy and boil it down into a book of less than 250 pages; but this the author has succeeded in doing fairly well. The book is divided into thirteen chapters, each one dealing with a certain portion of the human structure, and the whole written in a concise and easily comprehended manner, to be easily understood by one who has not to study anatomy in its most minute details. Dr. Bundy's book should find a very ready sale among both students and graduate nurses. Its price is $1.75.

A Text-Book of Pharmacology. Including Therapeutics, Materia Medica, Pharmacy, Prescription-Writing, Toxicology, etc. By Torald Sollmann, M.D., Assistant Professor of Pharmacology and Materia Medica, Western Reserve University, Cleveland, Ohio. New (2nd) edition. Octavo of 1070 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company. 1906. Canadian agents: J. A. Carveth & Co., Toronto. Cloth, $4.00, net; half morocco, $5.00 net.

In those days when there is so much agitation about proprietary medicines, with constant changes and additions to the B. P. and U. S. pharmacopeia, a new work on pharmacology is almost of necessity interesting.

Dr. Sollmann now submits to the profession the second edition of his text-book. It consists of over one thousand pages, and, from a mechanical standpoint, would be difficult to criticize. It consists of four parts. Part I. is devoted to "The Preparation and Prescribing of Medicines" and "Toxicology," divided into six chapters. Part II. is subdivided by the author into two sections, the first covering those "drugs with predominant systemic actions," the second "locally acting drugs." Part III. is perhaps the most instructive of all, and is thoroughly up-to-date. It deals with "Laboratory Work in Pharmacology." This is certainly in line with the modern system of university teaching. It takes up (1) chemic exercises, *e.g.*, drugs in urine, chemic antidotes, cor-

rosives on proteids and excised tissues, stains on human skin, etc.; (2) exercises on frogs and intact mammals, and (3) operative work on mammals. Part III. alone is worth the price of the book, and makes it eminently valuable as a university text-book.

Practical Dietetics. With Reference to Diet in Disease. By Alida Frances Pattee, Graduate, Boston Normal School of Household Arts; late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City; Special Lecturer at Bellevue, Mount Sinai, Hahnemann, and the Flower Hospital Training Schools for Nurses, New York City; St. Vincent de Paul Hospital, Brockville, Ont., Canada. 12mo, cloth. 300 pages. Price, $1.00 net; by mail, $1.00; C.O.D., $1.25. New York: A. F. Pattee, publisher, 52 West 39th Street.

Thoroughly practical and comprehensive, about describes Miss Pattee's book on dietetics. It is written *by a nurse for a nurse*, and should be adopted by the different hospital training schools without hesitation. It puts in attractive form the result of up-to-date and scientific nursing.

Women. A Treatise on the Normal and Pathological Emotions of Feminine Love. For Physicians and Students of Medicine. By B. T. Talmey, M.D., Gynecologist to the Metropolitan Hospital, N.Y. The Stanley Press Co., Publishers. 1906

A statement that the sexual instinct in women is subject to many variations and alterations, and that these are but imperfectly understood by a large proportion of physicians, may be accepted without argument. Unfortunately a large proportion of the literature bearing on this subject is pornographic in type and panders to unlaudable or prurient curiosity. As examples we may refer to the writings of Havelock Ellis and of Krafft-Ebing.

Most of us have had at times to feel the need of a work dealing in a broad, scientific and clean-minded manner with the great sex problems of a woman's life, and affording the basis upon which really helpful advice might be given.

The small volume before us appears to be the result of an honest attempt to supply just this want. If its use can be confined to those for whom it is written it will do good, while if read by others it is likely to be less harmful than books upon the sexual instinct usually are. The subjects here taken up are treated with candor and with dignity, and we are spared disgusting details regarding the sexual life of deviates and degenerates.

N. A. P.

Stöhr's Histology. Edited by Dr. F. T. Lewis. Sixth American edition. Philadelphia: P. Blakiston, Son & Co.

A new American edition of this well-known text-book requires very few words from the reviewer. Its reputation is so well established and its use so general in schools on this continent that one may say that its reputation is established. Its position in Germany is well shown by the fact that this American edition is from the twelfth German.

It is perhaps hardly fair to the work to leave the impression that it is simply a new edition.

Professor Lewis has rearranged the matter upon an embryological basis, has added a certain amount of embryological histology and has, as a result, produced a book of distinctly new character.

The Journal of Inebriety, after thirty years of continuous studies of the disease of inebriety and drug-taking begins its new decade by entering upon comparatively new field of physiological and psychological therapeutics, for the treatment of these neuroses. Arrangements have been completed by which *The Archives of Physiological Therapy* has been consolidated and will hereafter be published as a part of *The Journal of Inebriety.* This very able monthly has been developing parallel lines of study with *The Journal of Inebriety.* In the opinion of its managers its scientific value would be greatly enlarged by concentrating its work along some special lines. The disease of inebriety and its allied neuroses is a field of most practical interest, hence *The Journal of Inebriety* is selected as a medium for continuing the work of *The Archives of Physiological Therapy.* Henceforth, in addition to the various phases of this subject which *The Journal* has presented, the therapeutic effects of hot air, radiant light baths, electricity, massage, psycho-therapeutic measures and other physiological means will occupy a prominent space. This effort to clear away the confusion and broaden the studies of therapeutic means for cure will make *The Journal of Inebriety* one of the most practical and valuable visitors to every hospital and institution, as well as to all specialists who treat brain and nerve neurotics. We shall aim to present and formulate the latest studies and facts along these frontier lines, and in this way lift the whole field of therapeutics out of its present imperic stage into one of rational therapeutics.

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Original Contributions.

APPENDICITIS: SOME POINTS IN DIAGNOSIS AND TREATMENT BASED ON OVER 600 OPERATIONS.*

BY HERBERT A. BRUCE, M.D., F.R.C.S.,

Associate Professor Clinical Surgery, Toronto University; Surgeon to St. Michael's Hospital; Assistant Surgeon to the Toronto General Hospital.

My excuse for taking up such a common malady is simply that it is so common and even yet so imperfectly understood. There is, perhaps, no disease which a surgeon is so frequently called upon to see, and in which he must act with more promptness, than appendicitis. It is therefore desirable that not only the surgeon, but the general practitioner should have clear-cut views as to its treatment. I thought this a most favorable opportunity for getting the views first hand, of British and American, as well as our Canadian surgeons, and I hope that we shall have a free expression of opinion on the various points raised.

I think we are all of one opinion in regard to the important point of its treatment, namely, that the appendix should be removed. There will probably be a difference of opinion as to the best time to accomplish this. My own opinion is that in all cases of acute appendicitis the operation should be undertaken at the earliest possible moment. If this is the correct plan of treatment it is of the highest importance that the physician should make a very early diagnosis, for the responsibility of quick action rests upon him. Unfortunately, all of us have had the sad experience of being called too late, when twenty-four or thirty-six hours earlier would have saved a valuable life. It is highly important also that

* Read before meeting of the British Medical Association, Toronto, August, 1906.

the laity should be educated up to expect an operation in cases of appendicitis.

The strong opposition of friends has often improperly influenced the family attendant against suggesting an operation, knowing that it would be displeasing to them. I have many times been told by a family physician that, knowing the objection of the patient and his friends to an operation, he has hesitated about suggesting it, until the patient was so ill that it became urgently necessary to have something done. Then, unfortunately, it is often too late, and the operation becomes discredited. I remember very well a case of an only son who had an acute attack of appendicitis, and on the second visit, twelve hours after the beginning of the attack, the attending physician advised operation. The parents' objections were so very strong that he consented to treat the case in a "medical way," and was afraid to again suggest an operation until the patient was practically moribund. Then, when the friends realized that death was inevitable, they were most anxious that an operation should be done. At their earnest solicitation, although it was felt that his chances were practically *nil,* a simple incision was made, and drainage provided, for the abdomen was filled with pus. He died, and the friends were unreasonable enough to blame the operation for his death. It may not be amiss to say here (what I have frequently said to my class) that it is the duty of the medical man to tell his patient and the friends what is best to be done, even though it is displeasing to them, and leave to them the responsibility of delay. If it is clear that the patient's life is jeopardized by this, it is better that the physician should withdraw from the case than to have his advice disregarded.

A few words on diagnosis. Some of the conditions which are mistaken for appendicitis:

1. Purulent salpingitis.
2. Acute cholecystitis, empyema, or perforation of the gall bladder.
3. Tuberculous peritonitis.
4. Acute indigestion.
5. Malignant disease of the cæcum.
6. Perforation of the stomach or intestines, with general peritonitis.

One should note carefully the method of onset of the illness and the symptoms present. In appendicitis the illness begins suddenly, usually in a patient who has until then been in his usual health, although on close inquiry one may find that he has not felt quite himself for a day or two.

I wish to emphasize the point that the temperature and pulse are not to be relied upon, as in many severe cases there is very little elevation of temperature, and little increase in the pulse rate. In all my acute cases there has been rigidity of the right rectus

muscle; in more than one-half of the cases there has been vomiting; and in practically all there has been nausea. One should be able to distinguish between appendicitis and conditions in the pelvis, such as pyosalpinx, by a vaginal examination. In the latter condition there will be enlargement and tenderness of the tube, together with some fixity of the uterus. In acute appendicitis, where the appendix is lying to the outer side of the colon and pointing upward toward the liver—it may actually be in contact with the liver, and, if perforation occurs, an abscess may form here, closely simulating empyema of the gall bladder. However, in the latter condition the outline of the gall bladder is more clearly defined and usually pear-shaped, whereas an abscess would be more irregular and indefinite. In perforation of the stomach one would likely have symptoms of indigestion for some time preceding the perforation. There would be a history of shock and collapse at the time of the perforation, followed by pain in the epigastrium, and then all over the abdomen. In tuberculous peritonitis one might be able to make out free fluid in the peritoneal cavity and distension, with general tenderness, and a longer history, although (as in two cases quoted) the patient was practically in perfect health until suddenly taken ill. To sum up, we may briefly put the symptoms thus:

1. Pain. This is the first symptom usually complained of, at first referred to the stomach or umbilicus, but later on settling down in the right iliac region.
2. Nausea or vomiting within the first few hours.
3. Tenderness, most marked on the right side over the appendix.
4. Rigidity of the right rectus muscle.
5. After some hours some elevation of temperature and increase in pulse rate.

Treatment.

In regard to treatment, I cannot too strongly insist upon very early operation in all cases of acute appendicitis. If this in only a few hours after the beginning of the attack, so much the better. There is a very prevalent opinion among some members of the profession that if an operation be done within the first forty-eight hours, everything will be all right. Of course, this is an absolute fallacy, as very serious damage may be done even in twelve hours.

When a physician is called to a patient suffering from abdominal pain, and he is doubtful as to the cause, he should see him again in three or four hours, and if he then cannot make a diagnosis, he had better have a consultation.

Give no morphine until a diagnosis is made; to relieve the pain an ice-bag may be applied, or hot fomentations used; then, as soon as the diagnosis is made, call a surgeon, and let him decide as to

the time for operation. Do not give calomel and salts or any purgative, as the peristalsis thus produced will aggravate the condition.

In most cases occurring in a city or town where there is a hospital, it is best to remove the patient into the hospital, as some hours would be lost in preparing a room in the patient's house. I have frequently operated upon patients in the hospital two hours after seeing them in their homes, and in several cases as early as one hour after. I am satisfied that moving the patients carefully in an ambulance does them no harm. If perforation has occurred and pus has formed, and one is doubtful if it is walled off, the patient should be sent to the hospital in the sitting posture, as recommended by Fowler.

Now, as to the actual operation. The incision which I have found most useful is one through the sheath of the right rectus muscle, at a little distance from the outer border, with separation of the muscular fibres. This incision has two advantages: first, it is less likely than any other, unless McBurney's, to result in a hernia; secondly, if one requires more room, it can readily be extended upwards or downwards. When one opens through the peritoneum, if pus is found apparently free in the cavity, it should first be mopped out with gauze before making any further investigation. This is done so that if the pus be limited and localized, there will be no risk of spreading it. I have many times found pus lying free in the abdominal cavity around the appendix, without any limiting adhesions, and looking just as if it had been poured in, and that if the patient turned on the left side, it would gravitate in that direction. By mopping this up with pieces of gauze all the pus can be removed and drainage provided, and the general peritoneal cavity shut off by aseptic or iodoform gauze. If diffuse septic peritonitis is already present, we will open, wash out with normal saline (or not, as we think best), remove the appendix, and put in a drain; also a second drain above the pubis. The treatment of septic peritonitis will be fully discussed in a set paper, so I will not dwell upon it here.

When in doubt as to the condition of the appendix, it is well after opening the peritoneum to wall off the general peritoneal cavity with gauze sponges or pieces of gauze, so as to limit the field of operation to the region of the cæcum and appendix. Then, if there be a mass, in opening it and searching for the appendix if one suddenly comes upon pus, it will be caught in the gauze without distributing it throughout the general peritoneal cavity. This is a most important step in all operations for acute appendicitis, and I would consider any one guilty of neglect who did not take this simple precaution.

Next, the mass should be approached from the outer side, insinuating a finger down toward the situation of the appendix.

If the omentum is found surrounding it, this should be lifted up from the outer side. If an abscess be opened, it should be mopped out with strips of gauze, and then the appendix sought for and removed. If it is gangrenous, it will only be necessary to throw a ligature of chromic catgut around its base and cut beyond this. I think in all cases of appendicitis the appendix should be sought for and removed, if possible. I have seen a number of second attacks where there had been a former operation, and an appendical abscess opened, and no attempt made to remove the appendix. I would not advise an inexperienced operator, however, always to try to remove the appendix, for if he succeeds in opening the abscess, the patient is likely to recover from the attack, and the appendix can be removed at a subsequent operation. But in experienced hands it is practically always possible to remove the appendix without increasing the risk.

Another thing to which I would like to refer is the position of the patient after operation. In all cases of diffuse septic peritonitis I think the Fowler position a most valuable one, that is, to elevate the head of the bed a couple of feet, semi-sitting, so that drainage is downward toward the pelvis.

It has been clearly shown that there is more rapid absorption in the peritoneum of the diaphragm than in the pelvic peritoneum, and therefore if we drain upward we will permit of greater absorption. I have placed patients in this position a number of times with most satisfactory results.

I wish also to refer to the after-treatment of a patient with an abscess localized to the region of the appendix but not walled off. In order to prevent its becoming diffused the patient should have no nourishment by mouth for two or three days after the operation. Exclusive rectal feeding and administration of sufficient morphine to keep the patient free from pain should be the treatment. This latter has also the effect of limiting peristalsis. Formerly I gave normal saline by the bowel every two to four hours in small quantities (8 oz.), but I have lately been giving it in large quantities according to the plan recommended by Murphy, that is, by inserting a nozzle containing three or four openings into the anus, to which is attached a rubber tube leading to a bag. This bag is filled with water, and elevated but a few inches above the plane of the rectum, the idea being that the water shall just trickle into the rectum not much faster than absorption takes place. In his way from a pint to a quart of water should be allowed to trickle in during an hour, the process being a continuous one, and the flow so regulated that no accumulation of fluid takes place in the bowel. In other words, an attempt is made to run the water in as fast as it is absorbed. The object of having more than one outlet in the nozzle is that in case flatus accumulates in the rectum it will pass out through one of the openings

in the tube, while the others continue to discharge the water into the rectum. By this method large quantities of water will be absorbed within the first few hours after operation. After twelve hours the patient is given sips of hot water, and this is gradually increased until he is taking 2 oz. of hot water every hour. I am satisfied that this treatment helps to limit the disease, and to confine it to the region first involved.

Another question of great importance is the occasional development of ileus after an operation for acute appendicitis. It has been my misfortune to have had three fatal cases from this complication. The two great factors concerned in post-operative ileus are of either mechanical or septic origin. Finney, in an excellent article in the *Annals of Surgery* for June, divides post-operative ileus into three classes—mechanical, septic, and adynamic. The diagnosis of obstruction is of chief importance, and once this is established there is but one rational course to pursue. The sooner the necessary relief is accomplished the better. The main point is to differentiate between the mechanical and the septic variety, since these are the two forms most often met with, the mechanical being very amenable to treatment, the septic to a less degree. In a general way, mechanical ileus is characterized by its later onset, the presence of visible peristalsis, severe colicky pains, with slight change in temperature at first, and asymmetrical distension. Where peritonitis is present the picture is obscured, the infection masking the obstruction; the septic symptoms usually predominate. Where, following an operation, an ileus develops, unaccompanied by the above-mentioned symptoms, one has probably to deal with the adynamic variety.

As to the causation of the different forms of ileus, the early obstructions are in the vast majority of instances due directly to infection and its results. The later cases are more often due to old inflammatory adhesions which may have been drawn out into bands, and around or beneath which coils of intestine have become constricted. It will be seen, therefore, that the septic or adynamic forms of ileus occur more frequently in the early obstructions, while in the later ones the mechanical variety predominates. Just why inflammation of the peritoneum causes intestinal paresis, whether it is due to oedema or reflex action, vasomotor disturbance, or the local effect of the toxins upon the nerves of the intestines, is not known, but that all these factors are concerned is highly probable. If high enemata do not soon relieve the condition the abdomen will have to be opened again. If the cause of the obstruction can be found it should be removed, otherwise the distended loop of bowel should be opened and irrigated out. When this is done the opening may be closed. Unfortunately all of my fatal cases occurred in the country, and I was

not called again to see them, otherwise I would have opened the abdomen. In one case the wound was opened by the local physician, and an opening made in the distended loop, but no irrigation of the intestine was done. I have recently had a recovery from a case of adynamic ileus treated by enterotomy, with washing out and closure of the opening in the bowel.

An interesting fact in this connection, and as helping to explain the restlessness and, later, the great prostration noticed in ileus, is brought out in the work of Nesbitt and Ranzi. They found the constant occurrence of cholin and neurin in the intestine where the food contained a quantity of lecithin. While cholin is inert, neurin is a very active poison, very like muscarin in its effect. It has a paralytic action on the heart and upon the intestinal movements. Lavage of the stomach and intestine will mechanically lessen the amount of toxic substances absorbed.

I would like herewith to report the following cases, some typical ones, others showing conditions closely simulating appendicitis:

Case 1.—J. O., aged 23, patient of Dr. Burgess, August 11th, 1906. Patient went to business as usual on Friday morning, August 10th. He did not feel quite right, however, and took a dose of salts in the morning. About eleven o'clock he was taken with pain in the stomach, and went home and sent for Dr. Burgess, who saw him about one o'clock, when his temperature was 98 deg., pulse 80. He complained of general pain in the abdomen, particularly about the umbilicus, and was nauseated but had not vomited. The doctor ordered *m*xv of chloranodyne, to be repeated in four hours. He saw him again at six o'clock, and found him still suffering somewhat, although his mother had given him three doses of chloranodyne an hour apart. The temperature was now 99 1-5 deg., pulse 90. Dr. Burgess telephoned me, and I saw him at 8 p.m.; temperature 99 2-5 deg., pulse 80. He was feeling more comfortable, but examination elicited tenderness on pressure over the appendix, and a slight amount of rigidity. He was quite comfortable, and felt no pain unless pressed upon over the appendix. I explained to the friends, as is my usual custom, that the safest plan was to have the appendix removed at once, and suggested that he be taken to the hospital as soon as an ambulance could be got. As he lived a little way out of the city it was not possible to get him to the hospital until midnight, and as his symptoms were not urgent the operation was arranged for nine o'clock next morning. When he arrived at the hospital an ice-bag was applied. The next morning he looked and felt well, and was free from pain, with a normal temperature and pulse 80. The operation, nevertheless, was proceeded with, and the appendix was found slightly adherent to the posterior parietal peritoneum with a perforation at its base, and some of the contents

of the intestine, together with pus, lying free in the peritoneal cavity. The appendix was removed in the usual way, and the pus and intestinal fluid mopped up with gauze, and a rubber tube with iodoform gauze put in for drainage. He made a nice recovery. This is a case in support of the statement made early in the paper—that the pulse and temperature are of no importance as a guide to the gravity of the condition.

Case 2.—M. G., aged 10, patient of Dr. Hawke, June 26th, 1906. He felt some cramps in the evening, but said nothing about them. At eleven o'clock he awakened his mother, crying out with acute pain; later he vomited. He had a very bad night, vomiting several times. Dr. Hawke saw him in the morning, when his temperature was 102 deg., pulse 110, and diagnosed "appendicitis." I saw him at 3.15 p.m., temperature then 103 deg., pulse 122; rigidity of the whole abdomen, most marked over the appendix. His cheeks were flushed, but around the mouth and nose he was quite pale. He was very tender to the touch over the appendix, but not particularly so over the rest of the abdomen.

Diagnosis.—Acute appendicitis, with perforation or gangrene of the appendix. He was sent to the General Hospital in an ambulance, and operated upon immediately after arriving there at five o'clock, that is, eighteen hours after the beginning of the attack.

Operation.—On opening the abdomen I found the intestines around the caecum injected and covered with sticky fluid. Around the base of the appendix the caecum was very red, having very enlarged vessels upon it. The appendix was lifted out with difficulty, and the terminal 2 in. found of a greyish color, and covered with lymph. There was a small perforation at a point of constriction about 1 in. from the tip. He made a good recovery.

Case 3.—Mrs. C., aged 45, patient of Dr. Tilley, May 5th, 1902. She was suddenly taken ill with severe pain in the abdomen, general at first, then becoming localized to the right side. There was some rigidity of the right rectus and tenderness over the appendix; she had been vomiting; temperature 103 deg., pulse 120. I saw her three days after the beginning of this illness, when the condition was as given above. She gave a history of having had some trouble in one of her knee-joints, which we thought was tuberculous.

At the operation I found general tuberculous peritonitis and a very thickened appendix with tuberculous nodules through it, and also much thickening of the caecum. Large caseous nodules covered the entire peritoneum and peritoneal surface of the intestines. Both Fallopian tubes were very much enlarged, with caseous nodules all over them. I simply flushed out the abdomen with saline, and closed it. She made a good recovery, and has been in good health since.

Case 4.—Miss C., aged 18, patient of Dr. W. J. McCollum, November 5th, 1905. The patient had been ailing for a week; temperature 101 deg., pulse 110. On examination a mass could be felt in the lower part of the abdomen, extending across to the opposite side. The diagnosis of appendicitis was made, although I suspected pus tubes, but for special reasons did not make a vaginal examination.

On opening the abdomen in the middle line I found the right tube greatly distended, and it had made two complete turns at its uterine end. It was as large as a banana; its tip was quite black and the rest of a reddish-brown color. It was untwisted and removed, a small portion of the ovary being left behind. The other tube was examined and found to be distended about the size of a small banana, so it was removed. The appendix was also removed, although normal. She made a good recovery.

Case 5.—Miss S. Operation, March 8th, 1906. She had been ailing with more or less pain in the abdomen for two weeks. On Monday it became worse, and she became jaundiced. Her physician saw her on Wednesday, when her temperature was 102 deg., pulse 110. A mass was felt on the right side, which he diagnosed "appendicular abscess." He advised her removal to the hospital, but consent was not given until the morning of the operation, March 8th. I saw her in consultation with her physician at 11.15, and on examination found a mass in the right hypochondrium, as low as a line between the umbilicus and anterior superior spine. The lower margin was sharply defined, and dullness extended up and continued with liver dullness; below this the rectus muscle was not rigid, and the abdomen was soft. The hardness extended forward within 1 in. of the middle line and back to the lateral side of the abdomen.

A diagnosis of acute supurative cholecystitis was made, probably associated with gall stones. Advised immediate operation, which was proceded with at 12 o'clock. An incision was made over the gall bladder, and, as soon as the peritoneum was opened, bile was found free in the abdominal cavity. This was mopped up with sponges, and the gall bladder found to be of a reddish-brown color, having a somewhat gangrenous appearance. The omentum was adherent along the lower margin. The general peritoneal cavity was carefully walled off with sponges around the gall bladder and the latter punctured with a trocar. At first 2 oz. of opaque, glairy fluid came out, then 1 oz. of creamy pus. I then removed fifty gall stones; two or three of these were large and impacted in the cystic duct, and one in the common duct. She made a good recovery.

Case 6.—Mr. W., aged 48, patient of Dr. A. R. Gordon, March 10th, 1906. Two or three hours after returning home from a dinner party he was taken with colicky pains in the abdomen.

Hot-water bottles were applied, and Dr. Gordon saw him at 7 o'clock in the morning. At this time the pain was diffused over the abdomen. Temperature 99½ deg., pulse 70. Later on the pain settled down in the right iliac region.

At 8 p.m., temperature 100 deg., pulse 80, marked rigidity of the right rectus. I saw him at 9.30 p.m., when there was rigidity of the right rectus and very definite localized tenderness over the appendix. He said it pained him to move his leg up or down, but no pain was present when lying quiet and not touched. Sent him into the hospital and operated at 12.30 that night. The operation was done twenty-two hours after the beginning of the attack. Some fluid of a serous character came out immediately on opening the peritoneum. The appendix was adherent to the brim of the pelvis. When separated it was found to be club-shaped, the terminal inch being covered with lymph. On separating this lymph a patch the size of the end of one's finger was of a dark reddish color and was evidently becoming gangrenous. He made a good recovery.

Case 7.—Mr. S., aged 35, patient of Dr. John Noble, March 10th, 1906. He was taken ill at 1.30 p.m., with acute pain in the abdomen. Dr. Noble saw him and sent him home, after giving a hypodermic injection of morphine. Dr. Noble saw him again at 8 p.m. and telephoned me about 9 p.m., telling me the condition. I advised his removal to the hospital, and said I would see him on his arrival, and, if necessary, operate at once. On arrival at the hospital his temperature was 100.8 deg., pulse 110; the abdomen was rigid all over, but particularly over the appendix. There was some slight distension.

Operation.—1 a.m., twelve and a half hours after the beginning of the attack. As soon as the peritoneum was opened pus escaped. I then searched for the appendix, and, in separating two coils of intestine below the appendix, 1 oz. of creamy pus escaped into the sponges I had placed around. The appendix was pointing towards the middle line, 5 in. in length, and very much swollen. The terminal 1½ in. was as large as one's thumb, gangrenous and perforated. The base being healthy it was amputated in the usual way. Three strips of iodoform gauze were placed in for drainage. He made a good recovery.

Case 8.—Miss D., aged 20, patient of Dr. Moorehouse, March 17th, 1906. She had been ailing for four days, having all the usual symptoms of acute appendicitis. Pain was the prominent symptom, with vomiting every few hours from the beginning of the attack. On examination I found tenderness and rigidity over the appendix, and some rigidity and tenderness over the whole abdomen. Temperature 101 deg. F., pulse 120. I advised operation, and she was sent into the General Hospital.

Operation 3.30 p.m.—On opening the abdomen we found

miliary tubercles over the peritoneum and intestines. There was no fluid; the appendix was inflamed in common with the rest of the intestines, but there seemed to be more inflammation about the caecum than elsewhere. The appendix was removed. The large intestine was distended and of a dark color, and, on following it down on to the pelvis, we found that the sigmoid flexure was held and constricted by a band of adhesions which prevented even gas passing. Below the distended portion, which was about 6 in. in circumference, the bowel was collapsed. The band was evidently producing complete obstruction, which accounted for the vomiting. The abdomen was flushed out with normal saline, and closed with interrupted silkworm-gut sutures. She made a nice recovery.

Case 9.—Mrs. N., aged 35, April 23rd, 1906. Complained that eighteen months ago she had appendicitis for ten days. Before the attack was over she had severe uterine haemorrhage, and was in bed for seven weeks. Six months later she had another attack of appendicitis (?), and since has had pain in the right side, and for two months has had a yellowish discharge. Menses six days, getting more profuse.

Operation.—A curettement was first done, and a good deal of thickened endometrium removed. Then on examination we found the uterus enlarged and hard on the right side. I thought this might be due to a fibroid, and therefore made a median incision. Nothing was found wrong with the right tube, but the ovary was surrounded by inflammatory adhesions binding it down to the rectum and uterus. The right tube was involved in these adhesions, but not diseased. I separated the adhesions, and removed a fibroid about the size of a walnut from the right cornu of the uterus. The wall of the uterus was sewn with catgut. The appendix was then removed, although it seemed healthy. It was opened after removal and its lining membrane was quite healthy. It was evident that she had not had appendicitis, or if she had, the appendix had returned to normal. Recovery.

Case 10.—Sir Wm. H., aged 96, patient of Dr. John Caven, April 25th, 1906. Patient had a typical attack two weeks ago, a mass gradually making its appearance in the region of the appendix, 3 in. long by 2½ in. wide. It was thought that this might be carcinoma, but as it was adherent to the anterior abdominal wall and made its appearance suddenly and enlarged rapidly, we diagnosed "appendicular abscess." This case is simply mentioned on account of the age of the patient. The abscess was opened under cocaine, and 3 oz. of offensive pus evacuated, and two small drainage tubes were put in. He sat up daily after the third day. May 25th: Wound healed, and patient has been out driving daily for a week.

Case 11.—Mr. J. M., patient of Dr. J. T. Clarke. I saw the

patient, in consultation with Dr. Clarke, at 9 a.m., and got the following history: The day previous to this attack he had had a hearty meal at noon, eating a large quantity of lobster, etc. Two or three hours afterwards he had pain in his stomach. In the evening he took opening medicine, and his bowels moved between midnight and 2 o'clock, and again at 4 o'clock. He went into the bathroom and fainted while there. His parents were aroused, and found him in an agony of pain with cold perspiration standing out on his face. Dr. Clarke saw him at 6 a.m., pulse 160 and very weak, cold perspiration on face and neck, and complaining of severe abdominal pain and tenderness over the abdomen. Dr. Clarke gave him morphine, 1/4 gr. When I saw him at 9 o'clock his temperature was 100.2 deg., pulse 100, respiration 18, and he was complaining of pain in the region of the appendix. Abdomen was tender and quite rigid all over. He did not seem to be more tender on one side than the other. His face was pale and pinched. The diagnosis of a perforated appendix with general septic peritonitis was made. We had great difficulty in persuading him to have an operation done, although he had had two previous attacks in which Dr. Clarke had seen him and had diagnosed appendicitis. Another doctor had seen him two weeks after one of these attacks, and had said the boy had never had appendicitis, but that his symptoms were due to acute indigestion. On account of this opinion and the fact that this attack followed a large meal we had difficulty in persuading him, and his parents that operation was necessary and that it really was appendicitis.

Operation.—Immediately on opening the peritoneum some thin pus escaped. The appendix was found pointing downward towards the pelvis, 2½ in. in length, thickened, and with a perforation 1½ in. from its tip. There was no attempt made at walling off. After removing the appendix and mopping up the pus around it and putting in a tube surrounded with iodoform gauze, suddenly a large quantity of sero-purulent fluid came up into the wound. It was found that the pelvic cavity was filled with this. After mopping it out well with gauze, a drainage tube was passed down into the pelvis, a second one to the position of the stump, and a third up toward the liver. Gauze was placed down in similar positions, and one piece into the general peritoneal cavity. He made a good recovery.

Case 12.—Mr. C., age 63, patient of Dr. Macdonald (Markham), May, 1906. Patient had a typical attack of appendicitis two weeks previously from which he made a good recovery, but the mass which was present on the third day remained. A mass could be felt in the right iliac region, lying 1 in. to the inner side of the anterior superior spine and running parallel with Poupart's ligament. The mass was irregular and hard, 2½ in. in length by 1¼ in. in width, and crossing at right angles the line extending

from the anterior superior spine to the umbilicus. It did not seem to be attached to the anterior abdominal wall, and felt like a malignant growth in the caecum.

Operation.—Made an incision 3 inches long through the right linea semilunaris. On opening the peritoneum I found the omentum attached to the parietal peritoneum on the right side and posteriorly, this being also attached to the caecum, and a nodular mass apparently in the caecal wall. There seemed to be very little doubt on exposing it that it was malignant, and if it was malignant it was impossible to remove it, as it extended into the abdominal wall to the right and behind. A piece of omentum 2 in. square and ¾ in. thick was removed. I could then feel a hard mass behind running into the caecum and apparently extending into the peritoneum posteriorly. The apendix could not be seen. I decided to try and separate the mass from the abdominal wall, and this was done with considerable difficulty, but when got up it was found to be an enormously thickened appendix with a perforation in its middle. It was about 5 in. in length, and the size of two fingers in thickness. The mesentery was also enormously thickened. The appendix was removed by throwing a ligature of chromic gut around its base and inverting it into the caecum by a purse-string suture of catgut. About 1 drachm of pus was found around the appendix, and a few drops around the thickened omentum. Iodoform gauze was put in for drainage, and a second piece to wall off the general peritoneal cavity. The abdomen was closed except for the opening for the gauze. Patient left the hospital quite well, and with the wound closed on May 26th. Examination of the omentum showed it to be inflammatory.

Case 13.—M. W., age 17, May 17th, 1906. Diagnosed by his physician "colitis." History of two previous attacks like this one. The present one commenced with pain over the whole abdomen, settling down in a few hours to the region of the appendix. Vomiting; temperature 100.4 deg.; some diarrhoea, with passage of mucus. When I saw him tenderness was marked over the appendix, and a diagnosis of "appendicitis" was made and an operation advised.

Operation.—Found the appendix 3 in. in length, very congested and having, about 1 in. from the base, a constriction with a good deal of thickening. A number of newly-formed vessels ran up in the form of a leash from the mesentery of the appendix to the appendix at this situation. Around the base was another leash of newly-formed vessels. On opening the appendix after its removal it was found to be filled with pus and there was an ulcer at the site of the thickening. Recovery.

Case 14.—L. P., aged 25, patient of Drs. W. P. Caven and H. J. Hamilton, June 17th, 1906. Was taken ill Friday morning with pain in the stomach. He was given an emetic by his mother, after

which he vomited two-thirds of a cup of pure blood. The next morning his abdomen became rigid and tender all over, temperature up two degrees, pulse 100. Evening temperature 102 deg., pulse 110, abdomen rigid all over but slightly more tender in the region of the appendix. At first gastric ulcer was suspected, with perforation and general peritonitis, but on Sunday evening appendicitis with general peritonitis seemed probable. Operation Sunday evening.

Operation.—Under the anaesthetic I could find a distinct mass 1 in. above McBurney's point, and extending down to within 1½ in. of Poupart's ligament. An incision was made through the sheath of the rectus over this, and as soon as the peritoneum was opened a quantity of thin pus poured out. I mopped this up with sponges, and then found the appendix, which was very large, lying downward, and dipping over the brim of the pelvis. I lifted it out of the abdomen, when it was found to be 4 in. in length; the terminal half gangrenous, with two or three perforations. The proximal half was distended to the size of a banana, with a large faecal concretion in it. As the base was healthy, it was removed in the usual way. There was no lymph in the abdomen, and no attempt at walling off the pus. The abdomen was washed out thoroughly with normal saline. Another opening was made above the pubis, and a rubber tube inserted down into the pelvis; another was placed in the appendical opening down to the caecum, and one up towards the liver. Gauze was placed along these tubes and into the general peritoneal cavity. Patient was placed in bed in the semi-sitting position of Fowler, with the head of the bed elevated. Salines were given every two hours by bowel, nothing by mouth but sips of water. He made a good recovery.

WATER CONDITIONS IN TORONTO—A PLEA FOR FILTRATION.

BY JOHN A. AMYOT, M.B.
Director of the Laboratory of the Provincial Board of Health, at Toronto.

Toronto takes its water supply from Lake Ontario at a point about one-quarter of a mile out from the south shore of the Island about a quarter of a mile east of the lighthouse.

The depth of the water over the turned-up intake is fifty feet. A quarter of a mile further out the depth is probably 150 feet or over.

The intake pipe then traverses the Island and lies along the bottom of the Bay to a point at the foot of John Street, emptying there into the "pump well." The water thus reaches the well by gravity, and is pumped to the city without any change. There is no filtration of any kind.

Two-thirds of Toronto's sewage is discharged into the Don River and finally into the Bay, or directly into the Bay, without any treatment whatever. The other third is discharged directly into the lake west of the Island.

In the laboratory of the Provincial Board of Health during the last three years, 663 specimens of water on as many days were examined for colon bacilli and other sewage bacteria. One hundred and nine, or 16.4 per cent., of the specimens showed the presence of these intestinal bacteria in such small quantities of water as one cubic centimeter (severe infection). Normal Lake Ontario water does not show these. The presence of these bacteria are taken as evidence (the best) of sewage pollution of a water.

If intestinal bacteria are present it requires no stretch of the imagination to see where typhoid bacilli might go.

These infections were not usually on single days, but in groups of two or three successive days.

On referring to the meteorological reports for those years, it was seen that for twenty-four or forty-eight hours before these infections there were strong winds blowing either from the east or the west, driving the sewage either from the discharging Bay at the Eastern Gap of the harbor or from the open sewers on the shore at the west of the Island, towards the intake between these points.

Following out these findings during the past summer, Dr. Hodgetts, Secretary of the Provincial Board of Health, chartered me a small steamer to make observations and water collections off the Island shore and the Lake from Scarborough Heights to Humber Bay.

Several trips were made between August 31st and November 15th, 1906. Two hundred and ninety specimens, surface and deep, were collected.

On one occasion, optically, chemically and bacterially, pollution and infection with sewage was traced to a point three miles out into the Lake directly south from the Eastern Gap of the harbor, and along the shore a half mile and a mile, along two lines, to within one-half a mile of the intake, and I feel sure that if I had been able to go to the intake that infection would have been found over it. On another occasion infection was traced for half a mile along the south shore of the Island towards the intake, and was picked up again a half mile farther on and directly over the intake. In this case the sewage, by a strong east wind, was driven against the shore from the Eastern Gap and then deflected towards the intake. On another occasion, with the wind blowing strongly from the west, infection of the water was traced from the sewers on the lake shore over to the intake, being directed towards the south by the impact against the west shore of the Island. This same thing was observed again with the wind blowing from the north-west. Out of seven trips, infection was found at the intake four times.

On one occasion samples taken at a depth of 40 feet over the intake, showed infection as well as the surface samples taken on the same occasion. On another of the trips, the temperature of the water 40 feet down showed the same as the surface water, so that surface water can find its way to the intake mouth.

The lake water five miles out from shore can fairly be taken as normal. This did not show infection. The bacterial count showed only 8 and 10 per cubic centimetre. Whereas where the infections were found the general bacterial count showed from 125 bacteria per cubic centimetre to as high as 45,000 one time over the intake.

The deaths from typhoid fever in Toronto show the effect of these water infections. The rate for the last three years, putting the population of Toronto at a quarter of a million, for every 100,000 of the population was 21.7, practically 22.

Cities having pure water supplies like Vienna, Dresden, Frankfort, The Hague, Zurich, and our own Hamilton, Ont., show only 8 to 10 per 100,000.

Typhoid fever, of course, is not the only disease that is water borne. Cholera, but especially with us diarrheal affections, are. This last is quite sufficient to cause death in young and old subjects particularly. When the water is infected here the cases of diarrhea come into evidence prominently. The typhoid death rate, however, is the usual guage of the purity of a water supply.

Many cities show a larger rate by a good deal than Toronto. No city with a good, wholesome water supply shows as high a rate as Toronto. Here we can safely say that during the last three

years 88 deaths from typhoid fever have occurred that could have been avoided if we had had a pure water. The rest our neighbors are accountable for. One hundred and sixty-three deaths are only 7 per cent. of the cases that have occurred. Who is there that, knowing the misery of an attack of typhoid fever and the almost certain after-effects, would not prefer a broken leg if he were given his choice? During one of the outbreaks of typhoid fever in Toronto 210 cases were members of the fraternal societies. Of these, 12 died. It cost these societies, between death losses and an average weekly sick benefit of $3 for each of those sick, $175,000, and these workmen with their families are the ones least able to afford this loss.

Toronto's water is at times infected. This infection is from sewage reaching the intake from the sewers, chiefly from wind conditions. There is typhoid fever in Toronto beyond the unavoidable point. Toronto is not unique in this experience.

Chicago some years ago emptied all of its sewage directly by several sewers into the lake front. At distances apart four water intakes were situated one mile out from shore. The typhoid rate during the last three years of this condition was 115 per 100,000. Without altering the sewer outlets, the water intakes were carried from three to four miles out into the lake. For the next three years the rate dropped to 40 per 100,000. Then the famous drainage canal was opened. Three-quarters of the city's sewage was carried off by this to the Mississippi River. There was still the sewage of a quarter of a million of people being discharged into the lake. The typhoid fever rate for the next three years dropped to 22 per 100,000, the same rate as Toronto is now suffering from. The quantity of sewage entering Lake Michigan is now about the same as finally reaches Lake Ontario from Toronto.

At Cleveland, Ohio, with the intake a mile from shore near one of the outlets from the harbor, into which all their sewage entered, the death rate for some two years was 165 per 100,000. When water was taken by the new intake nearly four miles out from shore and at the end of the harbor farthest from the outlets, the rate dropped to 22 per 100,000.

In Toronto, before the new steel pipe was laid across the Bay, the rate for five years was 55 per 100,000. For the five years after the use of the new pipe was begun the rate was 21 per 100,000. In Hamilton, Ont., where the intake is so situated that it is nearly impossible under the present conditions for the sewage to reach it, the rate is 10 per 100,000.

In Zurich, Switzerland, where their intake and sewage conditions were much the same as in Chicago, the death rate from typhoid fever was for five years 76 per 100,000. An efficient filter, such as is advocated for Toronto, was installed. The typhoid rate for the next five years was 8 per 100,000.

The following table will at a glance show the average rate over years where the waters supplied are unpolluted:

Mountain stream, above all possibility of pollution:

Vienna	8	per 100,000
Munich	8	"

Artesian wells in unquestioned soil:

Frankfort	8	"
Dresden	7	"

Polluted waters efficiently filtered:

The Hague	8	"
Zurich	8	"

The following table of questionable and certainly polluted waters will show what is happening:

Surface waters collected behind dams, with the gathering areas policed:

Worcester, Mass.	16	per 100,000
New York	22	"

Great Lakes, with sewage pollution of varying degrees:

Toronto	22	per 100,000
Buffalo	45	"
Chicago	22	"
Cleveland, now	22	"

Polluted river waters (since either filtered or about to be):

Philadelphia	65	per 100,000
Lawrence	115	"
Albany	55	"

The last two cities have installed filters. Their rates have dropped to 30 and 20 respectively. Both of these cities have double water supplies, Lawrence for fire purposes and Albany from a surface source, or otherwise there is every reason to suppose that their rates would compare much more favorably with Zurich and The Hague. Philadelphia is rapidly installing filters in their widely extended system.

New York last week was advised unreservedly by the commission of experts appointed to report on means to reduce their death rate from typhoid, and to increase their nearly already insufficient supply, to filter all their water, when the additional supply was got from the Catskills.

At the last meeting of the American Water Works Engineers, held in Boston, it was practically the unanimous opinion that the natural waters of this country and the United States were not hygienically safe without efficient filtration because of extensive

pollution from closeness of population. It was also their opinion that however extensively in practice the sewage of large communities was treated by the sewage disposal methods now in vogue, it was cheaper and more uniformly safe to filter the water used for drinking purposes, if the effluents from these disposal works were discharged into the water source. In the thickly populated districts it is next to impossible to protect water sources from pollution. By proper filtration even badly polluted waters can be made as pure as such unquestionable ones as those derived from the snow caps of the mountains or from artesian wells bored into the proper soil.

The disposal of Toronto's sewage by the construction of a trunk sewer, of a large receiving tank, a pump, and 300 acres of sand filter beds near Danforth road, at the east of the city, has been proposed as a method of protecting the water supply. The cost of this would run into the millions. The maintenance and management would be high. The results would be perfect in uniform weather. During extended rainy weather the treatment end of the plant would be practically put out of commission. The sewage then would necessarily be discharged untreated into the lake at great risk to the water supply. Again in practice it would be found that sections of the city would not be connected with the system, notably the Island. The shipping also would not be looked after, and this is not a visionary danger, either. Many of the outbreaks of typhoid in the north of the Province have originated from the sewage of boats carrying typhoid fever sufferers infecting water supplies. This happened undoubtedly once at Byng Inlet. In the summer months thousands daily, many of them convalescent cases, come in and out of the harbor.

If filtration of Toronto's water was adopted, we would be sure of its uniform purity. Much simplified and cheaper methods for the removal of the gross suspended matter in the sewage could be introduced. A series of catch basins and septic tanks, requiring almost nothing for maintenance, would remove the 200 tons of organic and inorganic solids now reaching and filling up the Bay, and cost very little.

We could then for a cost much less than by the original plan have water filtration and a good method of sewage disposal that would meet all our requirements from a hygienic, a commercial, and an esthetic standpoint.

SCHOOL HYGIENE.*

BY PROFESSOR A. P. KNIGHT, QUEEN'S UNIVERSITY.

Ladies and Gentlemen,—Hygiene treats not merely of the health of the individual, but of everything that affects the health of individuals, whether grouped together in the home, the school, the community, or the nation.

When one member of a household falls sick the fact becomes a matter of household hygiene. If the sick member is a child attending school, and the sickness is due to a contagious or infection disease, the fact becames a matter of importance in the school which he attends and in the community in which he lives. Hence hygiene, in its widest sense, will include the following subdivisions: Personal hygiene, household hygiene, school hygiene, municipal hygiene, and national hygiene.

No one, of course, will pretend that these subdivisions are clearly marked off from each other. On the contrary, they touch or overlap at a number of points; but, nowithstanding the cross-division, it will give clearness and precision to our discussions, if we recognize some such distinctions as these when we use the term hygiene.

Now, on looking over our school laws and regulations, it is clear that the Education Department has charged itself with the duty of giving our teachers some measure of instruction in personal hygiene, household hygiene, and school hygiene. The regulations of last July will, in a few years, produce almost a revolution in school hygiene. They fix the basis upon which a large proportion of the legislative and municipal grants shall be distributed. In these regulations the Government touches the ratepayer on his two tenderest spots—love for his children and care of his pocket—his cupidity and his affection. The increased money grants offered for improvements in school accommodation, equipment and salaries will bear fruit an hundredfold throughout the Province. The Government deserves great credit for the stand which it has taken in these matters.

But while the Department has been thus planning for hygienic improvements in the rural schools, it is becoming increasingly plain that less attention is being given to personal hygiene—that is, to teaching children the essential rules of health—than there was two years ago. The cause of this is attributable to the changes in the regulations which went into force in August, 1904.

Up to that time, a written test had been exacted in physiology and temperance at the entrance examination. In 1905 this test was abolished. Now, while I am no advocate of the teaching of physiology and temperance to Public School children, the teaching

*President's Address, School Hygiene Section, Ontario Educational Association.

of these subjects up to 1904 involved a certain amount of instruction in personal hygiene, and therefore some of the rules of health could hardly fail to have found a permanent place in the minds of most school children; but with the abolition of the written test at the entrance examination the teaching of physiology and hygiene on our new curriculum is comparatively neglected, and the time thus saved is spent upon other subjects which will "tell" at the entrance.

But not merely do teachers neglect the teaching of hygiene; they do not know the subject, and, therefore, cannot teach it. The Education Department excludes this subject from the High School curriculum, and from the subjects of the teachers' non-professional examination. Whatever excuse may be given for excluding physiology and hygiene from a Public School pupil's examination, no good excuse can be given for excluding it from a teacher's. Of course, hygiene is not completely ignored. The Model School principal is allowed to assign the subject 50 marks out of 900 at his sessional examination, and the Normal School principal is allowed to allot it 50 marks out of 3,100 marks; but the Education Department does not recognize the subject as of sufficient importance to examine upon it at any professional or non-professional examination which it directly controls.

Perhaps no one has advocated the claims of hygiene to a place on the school curriculum more ably than has Herbert Spencer, and when we find that Spencer's book on education is one of the authorized text-books for the professional training of teachers, we wonder that the Department has been so remiss in its duty as not to make thorough provision for the teaching of this subject.

A child's happiness and success in life depends largely upon good health, and for this reason hygiene should occupy a first place among the subjects of the Public School curriculum. Now, good health depends chiefly upon two things: (1) A good heredity—sound ancestry—that is, a good constitution; and (2) it depends upon an observance of the laws of health. Our Public School system cannot give to pupils a good heredity; but it should see that every child in this country receives systematic and efficient instruction in the best methods of caring for his health.

No inordinate amount of time is asked for the subject in the school time-table. Fifteen minutes per week for the two lower forms and thirty minutes per week for the two upper forms would be amply sufficient to enable a competent teacher to cover a course of instruction in the essentials of the laws of health.

The fact is that personal hygiene and school hygiene should be matters of national concern with us, and should receive vastly more attention from the Education Department than they have hitherto. In the laudable desire to develop the resources of the farm, mine and forest, "the general purpose cow," the sawlog and the silver nugget have received more attention from the Government than

the health of our boys and girls. Half an hour a day for two or three years must be spent upon the study of plants, animals and minerals by those High School pupils who intend to become teachers, but not a minute a day is compulsory for the study of personal or school hygiene. Worms and weeds are apparently far more important to the nation than the health of its future men and women.

If our Education Department would but take the initiative, it could do a vast deal towards checking the ravages of consumption. This disease has claimed 64,928 victims for itself during the past 25 years. Now, we know that malarial fever has been stamped out of many infected districts through the co-operation of teachers, school children and parents, and there is no doubt that within a few decades consumption also might be almost exterminated, if only the Education Department would exert itself in the right direction. But certainly the right direction is not to exclude the teaching of hygiene from our High Schools, or to relegate instruction in this subject to the tag-end of an overloaded professional curriculum.

What are other countries doing in this matter? A glance at the regulations and curriculum of United States schools and of British schools will show that this address does not exaggerate the importance of hygiene teaching. In the former, physiology and hygiene have always held a prominent place; in the latter, the place which hygiene holds in the public mind to-day is most striking.

Public opinion in Ontario on educational subjects is more likely to be influenced from English than from United States sources, and therefore I may be permitted to point out that hygiene receives much more attention in England than in Ontario. In a small Blue-Book issued by the National Board of Education in England in 1905 there are eight pages of suggestions to elementary school teachers regarding the school and the health of the scholars. Not merely are such subjects as heating, ventilation, lighting, equipment, posture of pupils, etc., discussed, but signs of infectious disease, signs of good health, signs of poor health, normal children, defective children, and epileptic children. Moreover, an outline scheme for teaching hygiene and temperance is given in detail, and covers no less than fifteen pages of closely printed matter.

Add to this the fact that during the coming summer Britain is convening a second International Congress of School Hygiene. The first was held only three years ago. At this congress every aspect of the hygiene of school and scholar will be considered. From the facts thus briefly referred to it is abundantly clear that public opinion in Ontario is far behind what it is in Britain on this matter. Britain looks upon hygiene, especially since the Boer War, as a subject of vital national importance. Ontario gives it less attention than she gives to the feeding of pigs and cattle.

RESPONSIBILITIES OF HOSPITAL SUPERINTENDENTS.*

BY R. W. BRUCE SMITH, M.D.,
Inspector of Hospitals and Public Charities of Ontario.

THE agreeable task of presenting a few observations at this inaugural meeting of the hospital superintendents of Ontario was accepted only as an opportunity of furnishing evidence of sincere sympathy with the formation of such an association in this Province.

It would seem needless to dwell upon the good work which such an association may accomplish. The duties and responsibilities of a hospital superintendent are such that probably no class of people can derive more benefit from occasionally meeting together and discussing the many and varied problems that so often arise to perplex those engaged in institutional management. Co-operation is the key-note to success, and with the right spirit infused in such an organization as the one you are to-day forming, beneficial results must follow. It is always an inspiration for those engaged in similar duties to meet together. The daily routine with its wearisome details tends to blight originality, alertness, motive and enthusiasm. Nothing is so deadly as getting into a rut. Who does not need inspiration and new ideas?

The honor of founding the first hospital is usually ascribed to Fabiola, a friend of Saint Jerome, a Christian lady of Rome in the fourth century. We read that this Roman daughter of consuls and dictators sold all her goods, dressed the wounds of the maimed and wretched, and carried the sufferers on her own shoulders. Lecky, the rationalist historian, says of this charity that, "planted by a woman's hand, it overspread the world, alleviating to the end of time the darkest anguish of humanity." But, before this, similar institutions had been begun in the East, by Basil in Cesarea, Saint Ephraem in Edessa, and by the Presbyter Brassianus in Ephesus. Speaking of Basil's work, Gregory of Nazianzus said: "We have no longer to witness the fearful and pitiable sight of men like corpses before death, with the greater part of their limbs dead, driven from cities, dwellings, from public places and from watercourses. Basil it was who, more than any other, persuaded those who are men not to scorn men nor to dishonor Christ, the head of all, by their inhumanity toward human beings." From the East the impulse and direction came which, in the picturesque language of Saint Jerome, "transplanted this twig from the terebinth of Abraham

*An address delivered at inaugural meeting of Canadian Hospital Association at Toronto, April 1st, 1907.

to the Austonian shore." But, whether Fabiola was the first builder of hospitals or not, her name suggests the wonderful part which woman has had in Christian charity ever since. We are told that Placilla, the wife of Theodosius, the emperor, herself the first lady of the ancient world, visited the thirty-five hospitals of Constantinople, making the beds of the poor and becoming the maid-servant of the sick-chamber. We all know the name of the angel of mercy whom the Crimean War brought to the help of the English sick and wounded, and the name of the equally worthy minister of charity whom America now honors, Clara Barton, the representative of that Red Cross Society which knows nothing of nationality, and whose standard of peace and help is now lifted by more than a score of governments over the fields of carnage and death. We have read of that later heroine of charity whom Florence Nightingale inspired, Dorothy Pattison, usually known as Sister Dora, whose hospital work and whose marvellous strength and beauty of character have inspired many women to leave the dreary dissatisfactions of a life of fashionable pleasure for the enduring rewards of a life of charity.

In the process of time a marvellous development of the hospital spirit has been made. It means more to be a hospital superintendent now than ever before. Twenty years ago the Government returns for 1886 showed that 7,035 patients had been treated during that year in the hospitals of Ontario. Ten years ago the returns indicated an increase to 17,517 as the number of patients treated in our hospitals in 1896. The increase was great during those ten years, but not nearly so remarkable as those we had to present this year. The last report shows that during the past year there were treated in the hospitals of Ontario 41,950 persons, and that the total annual expenditure for hospital maintenance, including capital account, was $1,228,289. What do those figures mean? Do they indicate an increased public confidence, so that not only the poor, but the well-to-do class seek hospital treatment? Do those figures mean that our hospitals, by able management and greater efficiency, have justified themselves so that the rich are glad to bequeath large sums for their erection and support? With the material prosperity which Canada has been enjoying it is pleasing to note the fact that civic pride and local philanthropy have gone hand in hand in the matter of hospital progress, and we have been furnished with a manifestation of a social and humanitarian movement that is surely creditable to the people of Ontario. This growth of the hospital spirit will continue if we are able to demonstrate to the public that every dollar is used to do the most possible good. We must never forget that hospitals are established for the care of the sick poor, and in these days when

so much attention is paid to making private wards luxurious there is probably too great a temptation to favor the private patients at the expense of the deserving poor in the public wards. The resources of a hospital are a public trust, and they must be guarded and used as such. Economy consistent with good management is so evident in our hospitals that it is not necessary to dilate upon a subject which has been given an attention that has resulted in our hospitals being generously and deservedly commended for prudent management.

The remarkable increase in the number of patients admitted to our hospitals must be taken as an indication that the time has passed when the public looks upon a hospital as a chamber of horrors and considers it a misfortune for any one to be admitted thereto. This pleasing change in sentiment must be largely attributed to those in charge of our institutions.

The firm determination on the part of a hospital superintendent that everything possible shall be done for the patients will infuse much of the same spirit into all those who are employed in any capacity. Discipline is absolutely necessary, but, with a strict adherence to all the principles supporting good management, a willingness to allow every privilege consistent with proper conduct will always be appreciated. Just administration is generally found to faithfully exemplify "the art of being kind." As Canadians we are blessed with an innate love of fair play, and every one conversant with institutional life can recall instances in which the practical application of the Golden Rule has afforded a solution for many a difficulty. The supremacy of a hospital superintendent should be held by kindly influence rather than by interference. All the various departments must, if possible, be harmoniously related and be in perfect sympathy with and loyal to the head. There can be only one head to an institution. The value of ladies' auxiliary boards cannot be too highly estimated. Ontario hospitals owe a debt of gratitude for self-sacrificing devotion and zeal to such local boards, but none of the members of these should presume to dictate regarding the internal management of an institution. There is nothing to be feared from such a source if the superintendent takes and maintains a firm but dignified stand in regard to her or his responsibilities. On the other hand, a superintendent makes a mistake if the assistants in the hospital are not encouraged to go ahead and develop the different departments over which they are placed. An American hospital superintendent, whose rank is second to none, said to me not long ago, "I hope the day will never come when I shall be unwilling to learn some improved method of doing things from the employee in the most humble position in this institution." Such a remark coming from such a source

left an impression on me. Our hospitals are for the care of the sick, and the well-being of the patients must be the first consideration with every one. There is sometimes a danger that the details and necessary formalities of administration may absorb so much attention that the real object for which the institution exists may be occasionally lost sight of. Simplicity may readily be made the helpmate of accuracy in hospital management. Complexity in detail can be avoided and at the same time have such a perfect system of management that the life of the superintendent may be kept contented and serene.

A hospital superintendent must always bear an important relation to the general public. The patients' friends require no little attention. I know a hospital, more than a thousand miles from here, where excellent medical and surgical work was done, and where the patients were kindly and carefully looked after, but, on account of the superintendent being boorish in manner, a totally wrong impression was given to the public, and, in consequence, the financial results at the end of each year were not what they should have been. The visitors at a hospital are so often unreasonably exacting and difficult to control that great overdrafts are often made on the patient forbearance of the superintendent, who is called upon to answer their inquiries. Three hours one day in the week should be a sufficient allowance for regular visiting days, but, of course, when a patient is very ill, it should be possible by consent of the superintendent for a patient's friends to be admitted more often.

The design of every hospital architect now is to provide a building that can be readily kept clean. The constant desire of every hospital superintendent is for immaculate cleanliness, and, to maintain that condition with too often an indifferent corps of workers, is a perplexing problem. The extent to which the responsibility for hospital housekeeping depends upon the nurses in training is a question more difficult than I would attempt to solve. While it is necessary to instil into every probationary nurse that one of the foundation stones for success consists in having a patient's surroundings clean and neat, and that it is not a menial task to keep them so, care must be taken to spare, as far as possible, and protect from physical drudgery those who have enlisted for a life work in a calling which demands mental application as much as it does muscular activity. To meet the criticism one hears in these days of the overtrained nurse is an addition to every superintendent's endless duties.

Such an association as you are forming to-day might devise a uniform method of keeping hospital accounts. Some schedule might be prepared and carefully discussed that would lead to the adoption of a method of keeping accounts that might be made

common to all institutions. A uniform hospital register is a long-felt want in the hospitals of Ontario. It should not be a difficult task for such an association as this to suggest the adoption of a form of register that would prove, not only labor-saving, but one which would provide all information that should be recorded concerning patients admitted. With a uniform system of accounting and recording, the necessary book-keeping in connection with a hospital would cease to be a labor and the compilation of returns would become an easy task. The question of finances is one which nearly every hospital superintendent must ever have in view. By adopting a simple system of accounting it may be known from week to week what expenditures are being made for every item and the cost per patient for each article enumerated in the maintenance account. Every careful superintendent should clearly understand the resources of the institution, and, knowing what the possibilities for increase or decrease are, use discretion in directing and controlling expenditure. Prudent, judicious economy must, however, be distinguished from the parsimonious spirit.

A wise superintendent will never lose sight of the fact that the mission of the hospital is not confined to allay suffering and relieve the physical distress of those cared for within its walls. The hospital should ever spread a gospel of health and right living throughout the community where it exists. Not only should the institution be a model of sanitary housekeeping, but the doctrine it inculcates should do much to demonstrate the best and truest hygienic truths. The beams of light from a hospital should shine forth and enter every home within the radius of its influence, so that the superstitious and baneful influences that shadow many lives may disappear as mist before the morning sun. The hospital in its great mission of teaching people how to live, in order that they may keep healthy, has a field of ever enlarging usefulness. The establishment of local sanatoria for consumptives in Germany has done more to educate the people in regard to the nature and prevention of tuberculosis than any other agency. Where prejudice once existed in regard to the establishment of these local sanatoria, through a misconception of the nature of the disease, it is now found that in the immediate vicinity of these institutions the disease has become practically unknown. These good results are entirely attributed to the fact that the people were taught how to live. Every hospital has its sphere of usefulness, then, in becoming an educational institution, not necessarily where its wards are visited by students, but through the potent influence which a wise superintendent may exert in aiming to make all the departments of the hospital helpful to all who come in contact therewith. I do not

know of any calling in life that requires greater versatility in talent and larger resources than are looked for in a hospital superintendent. Patience with them must never cease to be a virtue. Their mission in life unfolds for them new fields of usefulness from day to day. As heads of institutions devoted to the care and relief of suffering humanity they must rule and guide with the spirit of Him who left for us the first example of the hospital spirit. Whether at the head of a hospital large or small, your mission is to shed forth a radiance from the torch which privilege has placed in your hand. May this organization of the hospital superintendents of Ontario inspire new zeal and earnestness and be helpful to each one personally and to the institutions in this Province for whose welfare you have rendered such valuable and faithful service.

Selections, Abstracts, Etc.

WHAT CAN TREATMENT DO FOR THE PROPHYLAXIS OF THE VENEREAL DISEASES.*

BY HERMANN G. KLOTZ, M.D., NEW YORK.

Of the dual objects of this society which are indicated by its name moral prophylaxis has heretofore received by far the greater attention by the authors of the papers read, by those who took part in the discussions and by the audiences in general. And deservedly so, for the questions considered were of the utmost importance: The necessity and the practicability of spreading satisfactory knowledge of the existence and of the functions of the reproductive organs, of their care and of the consequences of their abuse. On the other side the question of the awakening and strengthening the moral sense of the community and principally of that still youthful generation which is destined to form the community of the future. However, even under the most favorable conditions we cannot expect that the progress of the moral education will be a very rapid one; we must be prepared to see many years pass, perhaps an entire generation before its real effects will become visible and measurable. In the meantime we have to reckon with that enormous number of individuals of both sexes who at present are already affected with one or more of these so-called venereal diseases. Each one of these individuals represents a possible focus of fresh infections, a source of danger to innocent individuals as well as to those who wilfully expose themselves. Here, then, we have a large field in which moral prophylaxis must give precedence to sanitary prophylaxis.

Incidentally to the consideration of the questions of moral prophylaxis by the society, sanitary prophylaxis has quietly and almost unconsciously taken an important step in advance; heretofore those diseases which have their origin mostly in the social evil were not allowed to be mentioned at all in any but the strictest medical assemblies; outside of the profession the venereal diseases were covered with a veil of mystery; with misplaced prudry, mistaken morality, and with a certain self-righteousness society and even charity refused to take notice of these diseases, although necessarily not entirely unconscious of their existence. Now at

* Read before a meeting of the American Society of Sanitary and Moral Prophylaxis, February 14, 1907.

last the names of these diseases have been brought forth before general audiences which have nobly overcome their former prejudices; the general distribution of these diseases and their widely spread injurious influences on the highest interests of human society have openly been described and discussed. Therefore we can say that the venereal diseases are at last beginning to be deprived of the long-enjoyed advantages of the unknown enemy, who could make his insidious attacks under the most various covers. We can now take another step forward in sanitary prophylaxis by putting forth the question: What can be done to lessen or remove the dangers inherent to the present prevalence of the venereal diseases? In order to do so intelligently it seems necessary to give a brief sketch of the characteristic features of the diseases themselves and to compare them with other diseases which have become the subjects of private and public sanitary prophylaxis.

In the eyes of the medical profession at present probably gonorrhea occupies the most prominent position on account of its influence on the general welfare of the community, and particularly in regard to the frequency with which it contaminates marriage. This position gonorrhea has attained only within the last few years. It was long considered a simple inflammation of the mucous membrane of the genito-urinary organs, principally of the urethra of men, caused by irritations of various character, infectious to a certain degree, but mostly looked upon as a mere local affection of little consequence. Not until about thirty years ago was gonorrhea suspected of having very close and important relations to a number of diseases and diseased conditions particularly of the female reproductive organs. This was some time before 1879, when Neisser published his first report asserting that he had discovered the immediate cause of gonorrhea in the shape of a specific microbe, which he fully described and called the gonococcus. The general confirmation of Neisser's discovery and the improved facilities of demonstrating the gonococcus by various staining methods soon proved that those suspicions were only too well founded. The gonococcus has now been sufficiently studied and we know that once it has invaded some portion of the mucous membrane, it not only tenaciously sticks to it, but also, enormously multiplying, rapidly spreads over the contiguous portions of the mucous membranes, primarily on the surface, but also into the deeper tissue layers, and particularly into the glandular organs. As the mucous membrane of the entire genito-urinary canal in both sexes forms one continuous lining without any strict dividing line between the peripheral and the more remote and complicated internal organs, it is easy to understand that the gonococcus may find its way into all the more or less important organs and cause there various destructive inflammatory processes, often dangerous to life. Strictly speaking, these affections are still local ones; however, the

often unexpected discovery of the gonococcus in different joints, in tendons, bones, and other organs quite remote from the original seat, has demonstrated that the gonococcus may be transported by the way of the lmyph and blood vessels, or directly through the tissues, and may cause foci of infection and various symptoms in these remote situations. In a comparatively small number of cases the gonococcus has been found in the blood and in the heart with local affections of the valves, causing a severe and usually fatal general affection. In other cases again symptoms of a general infection have been observed in which not the gonococcus itself, but its toxins or poisonous products seem to have caused the general symptoms.

The local inflammation which usually follows within a few days the infection by the gonococcus may show various degrees of intensity, depending probably upon different conditions of the infected tissues, or, if you please, upon individual predisposition. It becomes manifest principally by a more or less purulent discharge, which contains the gonococcus in large numbers. After a certain time the inflammation usually subsides, and it may cease entirely after four to six weeks without reaching any of the more important organs, with the complete elimination of the gonococcus and perfect restoration to healthy conditions. More often, however, subacute stages follow and lead to a state of chronicity; a slight discharge, principally found in the morning, may continue without any intervals of apparent cure, or all the symptoms may for the time being disappear only to reappear upon the slightest provocation in a more or less acute manner. But the gonococcus may also remain hidden for long periods of time without even the slightest signs of any disease and still retain its infectious qualities if transferred to some other individual. Gonorrhea may, therefore, last indefinitely. It does not affect the offspring directly, except perhaps by infection of the eyes, but it greatly reduces the birth rate by destroying the functions of the important reproductive organs in both sexes.

The venereal ulcer, chancroid or soft chancre, is essentially a local trouble, at least as far as our present knowledge warrants. Under this name have been included sores or ulcers of the most different origin, course and termination; many, undoubtedly, not venereal, but due to uncleanliness and other causes, and in numerous instances not infectious nor inoculable. Some of them, however, exhibit some more pronounced and characteristic features and decided virulency, and in them a specific microbe, the so-called streptobacillus of Ducrey and Unna has been found with some regularity, so that many authors are inclined to restrict the term chancroid to such ulcers, and to consider the Ducrey bacillus as the specific causative agent. Such ulcers occur singly or multiple on the cutaneous as well as on the mucous surface of the external

genital organs in both sexes, only very exceptionally on other portions of the body. They usually begin within a few days after exposure as pustules, which rapidly break down into ulcers of various form and depth, mostly showing a persistent tendency to peripheral extension, and may cause quite wide destruction of tissue; they may be very painful or may cause only very few subjective symptoms at all, but quite often are accompanied by an inflammation of the neighboring lymph glands, the so-called bubo, with a tendency to suppuration and the formation of external ulceration, the product of which may in turn become highly infectious. The chancroid often lasts for weeks and even months, but finally will heal without any impairment of the general health, usually, however, leaving a distinct scar.

Syphilis, on the other hand, is essentially a constitutional disease, affecting the entire organism and liable to produce changes in all tissues and organs of the body. Within the four hundred years within which syphilis has been rampant all over the civilized world, experience has taught us a great deal about this disease, but until quite recently all endeavors to discover its infectious agent have been unsuccessful. Only within the last two years discoveries have been made which bid fair to solve the mystery and promise much further light, and perhaps more efficient measures to fight against the disease. The virus, whatever it may be, is contained in the blood and in all tissue fluids, particularly in the discharges of any wound or even abrasion of the skin or mucous membrane, however small. It requires a similar break in the continuity of the normal protecting cover of both, on whatever locality of the human body, to enter into the system, and therefore it is by no means restricted to the genitals, but it is only too frequently accidentally inoculated on innocent individuals.

Once the virus has obtained such a hold, it immediately spreads to the neighboring tissues, without at first any outward sign until after a period of twelve days or more. Then it develops its first local symptom, the chancre, usually in the shape of an erosion or an ulcer which generally shows some very characteristic features, particularly a peculiar hardening, soon followed by an intumescence of some neighboring lymph glands. Only after another interval of quiescence, from six to eight weeks after the infection, the so-called secondary symptoms appear, mostly on the skin and mucous membranes. These lesions again often suffer a superficial breakdown with eroded surfaces furnishing highly infectious material. In the so-called secondary stage the disease remains for several years, usually not less than two, during which the symptoms may disappear, followed by occasional new eruptions and by periods of latency; sometimes the eyes and some bones become affected. The infectiousness remains the same throughout this period. Later on the disease may disappear never to return, and

leave the individual apparently fully restored to health. In a not inconsiderable number of cases new outbreaks occur later, mostly localized and principally affecting the skin and the mucous membranes and neighboring tissues in the throat and nose, but these so-called tertiary manifestations may occur in almost any organ of the human body, often causing permanent impairment and destruction, the importance of which largely depends upon the importance of the functions of the affected organs. The nervous system is considered the most vulnerable. A large number of chronic morbid conditions of the internal organs are now attributed directly or indirectly to syphilis which do not exhibit any characteristic anatomical features, among them affections of the spine and certain forms of insanity. Many of these diseases end fatally, but death is usually not officially attributed to syphilis.

Not satisfied with thus destroying the health and life of those who have acquired syphilis, the disease is liable to affect the offspring in the most disastrous manner. In the largest number of instances, pre-eminently so in the cases where the mother is diseased, the children perish before birth, causing miscarriage or premature birth. In others the children are born on term and alive, but with direct manifestations of syphilis. They usually succumb sooner or later to the effects of the disease itself or become an easy prey to other disease. Or they survive, to develop tertiary symptoms later on, or to remain poorly developed in body and mind for years or for life, while here and there children are born healthy and remain healthy under conditions where the contrary was to be expected.

How widely disseminated these venereal diseases really are, and how often they bring misery into married life and into the family, has been repeatedly explained and commented on before these audiences; the sketches of the diseases themselves just given, I hope, have made clear in which particular way the injurious consequences are accomplished, and what chances they offer for sanitary prophylaxis. The question therefore presents itself: What can be done towards their suppression?

Legislative and administrative measures can be dismissed from consideration in a few words: The experience in many cities and countries in Europe and elsewhere has sufficiently demonstrated the inefficiency of *réglementation* and similar measures; in this country they would hardly be supported or even tolerated by public opinion, at least certainly not at the present time or in the near future. Some relief might be obtained through legislation, if the law would make it a punishable offense to wilfully and knowingly infect another person with any of the venereal diseases, although the difficulty of finding the victims willing to testify against the offenders might render such a law but little effective.

But cannot the health authorities interfere as they do in the suppression of other diseases? Quite recently, at a meeting held in this very room, a former President of the Board of Health of this city has explained how the health authorities have taken the initiative in the fight against contagious disease whenever such an opportunity has offered itself. Why have they never touched the venereal diseases? The answer can easily be given and understood, if you will compare the latter with those diseases against which the health authorities have acted, namely, the so-called acute exanthemata, measles, scarlet fever, chicken-pox, smallpox, diphtheria, typhus fever, to a certain extent typhoid fever and pneumonia, and finally tuberculosis. All these diseases, with the exception of tuberculosis, are of comparatively short duration; they run their course in several weeks at the utmost, and after that time they leave the patients free of any danger of infecting other individuals; even if they occur in large numbers, they are usually divided into groups of small size, and therefore it is not so difficult to isolate and to segregate the patients during the entire period of their infectiousness without making too extravagant demands on the public service. Besides, these diseases mostly render the patients incapable of following their usual occupation or work, so that enforced idleness does not involve any hardship; the diseases generally become so distinctly manifest that they cannot easily be concealed, even if there existed more reason for concealment in the absence of any shame or disgrace being connected with their acquisition. On the other side, the acute exanthemata are practically not immediately affected by any treatment, but principally require nursing and hygienic surroundings; at the same time they are all more or less of grave character, liable to cause death, and therefore looked upon with sufficient fear by the public in general to make any preventive measures welcome.

All these conditions which favor the control of the health authorities in the contagious diseases just considered are absent in the venereal diseases. Only the least important one among them, the venereal ulcers, are of a comparatively short duration, and perhaps their number, probably greatly varying at different times, is not so very large. But they are easily concealed, so long, at any rate, as they allow the patient to follow his occupation, and would probably evade detection by the health officers, and thus render control ineffective. Gonorrhea and syphilis, however, occur in such an enormous number of cases that it would be absolutely impossible to follow up each one. Another difficulty is met with in the long duration of the diseases themselves and of the period of their infectiousness, and by the intervening of more or less prolonged intervals of latency, during which it is impossible or at least extremely difficult, with our present means, to establish the proof of infectiousness. Then

infectiousness is not absolute, but is limited to certain conditions. It is naturally entirely out of the question to isolate such large number of patients on a separate island, like those affected with lepra; it is out of the question to keep all the patients under surveillance in our country with its largely migratory population, particularly so in a large city. Under such circumstances it would hardly be of any practical value, as has been proposed, to make reports of all cases of venereal diseases compulsory to physicians, although without the name of the patient. The principal effect of such a measure would be to make the patients conceal their troubles even more than now, and drive them still more into the hands of quacks and unscrupulous physicians who would avoid making any reports. Some of these difficulties, it is true, apply also to tuberculosis, principally the large number of those affected, but in tuberculosis there is not so much reason for concealment, as the disease is not degrading to the patient in the eyes of his friends and acquaintances, but rather makes him a subject of pity and sympathy. Besides, concealment is in most instances hardly possible, since the disease usually becomes sufficiently manifest by some symptoms; moreover, it soon affects the working capacity of the patient, and is known to be highly dangerous to life, while the venereal diseases, as a rule, do not incapacitate for work, except perhaps temporarily, nor immediately cause serious conditions or danger of life. So there seems to exist sufficient reasons why we cannot expect the health authorities to alter the course heretofore taken, even if public opinion was prepared to sanction, favor and assist any active procedures.

In regard to one of the contagious diseases we are fortunate enough to possess a prophylactic remedy of the greatest usefulness, namely, vaccination against smallpox. In some ways it would seem to be an ideal prophylactic measure, if a similar virus for inoculation against syphilis could be found. Indeed, experiments have at several times been made with this intention, but so far the fact that neither the causative microbe had been discovered nor any animal susceptible to inoculation of the syphilitic virus and suitable for such experiment had yet been found, has prevented success. But even if the recent discovery of the active microbe and the successful inoculation of syphilis on monkeys should in time lead to the preparation of some prophylactic serum, would it not be considered by many as a blessing of doubtful value, because it would be rather the means of affording immunity to immorality?

The question then naturally arises, whether the venereal disease cannot be influenced by treatment, either by effecting a complete effacement of the disease itself, or at least by abolishing or rducing its infectious features. Fortunately, we can answer this question largely in the affirmative. All three diseases have one

feature in common: Their virus, whether of well known or unknown nature, is a fixed one—that means it is attached to or contained in some certain tangible substances, and can only be acquired by immediate contact with such substances, either while located on the patient himself or after having been transferred to some intermediary host; in no other way can the virus be transferred. The problem, therefore, is to prevent as far as possible the formation of these substances or to destroy their infectiousness. Let us see how far this cone be done.

As to the venereal ulcer, as we have seen, the disease is restricted to one or several circumscribed foci which furnish the infectious material, and these are as a rule superficially located, so that they can directly be attacked with caustics and disinfectants; in many instances it is also possible to surround them with protective dressings, largely diminishing thereby the danger of the propagation of the virus to other individuals. As a rule one or several applications of caustics and the reactive inflammation caused by the same will be sufficient to transform the infectious ulcer into a clean wound and gradually induce complete healing.

Syphilis, soon after it had made its appearance as an epidemic towards the end of the fifteenth century, was found to be amenable to treatment by mercury, and this drug, in spite of much opposition, has maintained its supremacy in the fight against syphilis throughout all this time, notwithstanding the many abuses to which it has been subjected, and which justly have been censured, and in spite of the prejudice against its use found among physicians, as well as among laymen, and largely among the general public. Indeed, perhaps with the exception of quinine as a remedy against malaria there is in medicine hardly an example of so specific an effect on the manifestations of any disease, and we may expect a favorable result from its administration almost with the certainty of a physiological experiment. It is only in regard to the method of its application that opinions differ, and the progress that has been made in all branches of medicine has also enriched us with new and more powerful means of treatment. Later on iodine had proved a powerful auxiliary. Besides, the importance of hygienic and sanitary measures and of the maintenance of the best possible conditions of general health have been duly recognized. The question whether our treatment removes only the manifestations of the disease or the latter itself is perhaps still an open one. For the purpose of sanitary prophylaxis even the removal of the symptoms is of great importance, because incidentally the opportunity for the formation of infectious material and therefore the opportunity for the infection of other individuals are thereby greatly reduced. It has been demonstrated beyond doubt that efficient treatment in the early stages largely diminishes the probability of the appearance of the late or tertiary

manifestations. Efficient treatment of the parents also undoubtedly reduces the mortality among the children.

As to the effects upon the disease itself, it seems that syphilis, like the more acute infectious diseases, has the tendency to run a certain course, and after a more or less extended duration to cease voluntarily, for we see occasionally patients exhibit some slight early symptoms, and even without any treatment remain perfectly free from any symptoms afterwards; and although this probably cannot be demonstrated by exact statistics, common experience will show that a large number of patients who receive timely and efficient treatment, and take generally good care of themselves, remain well, have healthy wives and children, and reach the same average age as nonsyphilitics. It must not be overlooked that syphilis does not convey immunity of other diseases, and that naturally, considering the large number of its victims, a large contingent are liable to succumb to diseases which also attack and often destroy the nonsyphilitics. On the other hand, only too many cases which have been neglected show the contrary conditions. We may therefore state that, while we cannot positively claim to cure syphilis by treatment, we certainly can be of great assistance in a final recovery. So far we are restricted to the old standbys, mercury and the iodides. Possibly the recent important discoveries may in time lead to the discovery of a curative serum, as is the aim of all these investigations, but for the present positive results have not yet been obtained, according to the most recent statement of Neisser, one of the most prominent workers in this field.

Coming finally to speak of the treatment of gonorrhea, we find a much more difficult and complicated situation. Theoretically, the problem seems to be a very simple one; we know the causative agent, and we know a number of remedies which are sure to destroy the same whenever and wherever they are brought in contact with the coccus. Practically we find on the one hand that these remedies are injurious to the tissues in which the gonococcus is found, and, therefore, they must be applied with great caution. On the other hand, the gonococcus is liable to migrate to localities and to organs which we cannot directly reach. The time is not so far remote when the treatment of gonorrhea was considered so simple a matter that many physicians considered it beneath their dignity to treat a patient for gonorrhea, or more frequently did not think it necessary to examine him before prescribing one of the usual remedies. But since the gravity of the disease and of its consequences has been better understood, much thought, study and work has been devoted to its treatment, and many new methods of treatment have been recommended and introduced into practice. Thus we have become enabled not only to shorten the duration of gonorrhea in many cases and also to

reach the gonococcus in situations in which we formerly seemed helpless. Many cases can be cured in a comparatively short time if taken care of in an early stage. There is still some opposition to early active treatment, although common sense seems to clearly indicate that in an early stage the disease must be still sufficiently localized to offer opportunities of preventing it from extension to deeper regions. While it must be conceded that some conditions in gonorrhea at present have to be considered incurable, I cannot sympathize with those who, in every discussion of the treatment of gonorhhea, solemnly rise to explain, what everybody else already knows, that the gonococcus may be hidden deeply in some gland wherefrom it cannot be dislodged, and will stay there forever, menacing future infection. It does not seem fair to throw a wet blanket over the honest efforts of those who indefatigably try to improve older methods or to introduce new and more effective ones. Much has already been accomplished in reaching the cause and the seat of the disease. What before seemed impossible, and there is no reason to give up further efforts. I only mention the recent experiments with a curative serum which seem to prove the possibility of destroying the gonococcus in distant organs and of curing conditions which heretofore seemed to resist and defy all treatment.

In giving these general outlines of the possibilities of treatment of the venereal diseases, enough, I hope, has been shown to make it plain that we are by no means powerless against those diseases, and that much can be accomplished by such treatment to reduce the dangers of infection. In the absence of other means we therefore have, for the present at least, to look to treatment in connection with hygienic education of the patients as the most important means of sanitary prophylaxis of the venereal diseases. The next question will be the practical one, how to make such treatment available to the largest number of patients.—*N. Y. Med. Jnl.*

130 West Fifty-eighth Street.

ABSTRACTS.

Nose and Ear Suppuration and Facial Erysipelas.—C. F. Welty, San Francisco, Cal. (*Journal A. M. A.*, December 22), accounts for the special frequency of erysipelas in the face by its nearness to the source of infection in the nose or ear. The pus secretion produces an abrasion of the skin or mucosa, and inoculation follows. This may also be conveyed by the handkerchief, or, more frequently, he thinks, by the finger. The reason

for the so frequent recurrence of erysipelas is, he says, because the infection is always present and is practically never eliminated without operation. When streptococci can be determined in the secretion of the ear or nose it should be considered as an established fact that the erysipelas is dependent on them. The reason why 82 per cent. of facial erysipelas starts from the angle of the nose is thus explained. The reason that erysipelas does not occur in every case in which streptococci exist in the secretions is best given by assuming immunity or modified virulence; not every case of exposure to other infections is followed by the outbreak of the disease. These opinions are supported by the results of the examination of some sixty cases of erysipelas in the City and County Hospitals at San Francisco. Idiopathic facial erysipelas, Welty says, is a misnomer.

Keratosis Obturans.—G. S. Ryerson, Toronto, Can. (*Journal A. M. A.,* December 22), reports two cases of this condition, one of long duration and accompanied with deafness, loss of memory and of the power of attention, all of which were relieved by the removal of the growth. The other was an acute case, of interest on account of the similarity of the symptoms to those of mastoiditis. He remarks on the rarity of the disease; the cases described were the only ones met by him in his private and hospital practice of over a quarter of a century. In neither case did there seem to be any connection of the growth with middle-ear disease, though there was a history of suppurative trouble in both.

Tuberculosis Sanitaria.—The effect of tuberculosis sanitaria on the value of surrounding property forms the subject of a paper by W. H. Baldwin, Washington, D.C., in *The Journal A. M. A.,* December 22. He discusses the general subject of institutions in their effect on the surrounding values and gives the result of an inquiry based on a correspondence with fifty-nine of the largest sanitaria in the country. A series of questions was sent out covering the factors that might be active, such as the location, capacity, time established, nature of buildings, quantity of land, class of patients received, distance on which effect on values was appreciable, etc. From the answers received it would appear that in 58 per cent. of the instances, adjoining values had increased, accompanied in 17 per cent. by a change for the better in the purposes for which the land was used. In 35 per cent. there was no change, and in 7 per cent. a depreciation of adjoining values was admitted. In 37 of the 59 institutions reporting there had been no opposition at any time on the part of the community, in 14 there had been opposition which had disappeared,

in 5 there was still opposition to the institution. Of course the complexity of the question is recognized, and it cannot be determined whether the institution or other cause is responsible for certain effects. The most striking good effect undoubtedly due to the institution is shown by the Adirondack Cottage Sanitarium, where the increase of its popularity and of the prosperity of the surrounding population has been very markedly noticeable. Similar reports come from Liberty, N.Y., Rutland, Mass., Gravenhurst, Ont., and elsewhere. It would appear that the opposition is comparatively a recent thing, as a number of striking instances here referred to indicate. Such prejudices deserve consideration, and needless interference with values should be avoided, though experience has shown that there is absolutely no danger in a well-conducted sanatorium. A wise policy in the projectors and conductors of such will make them a recognized direct benefit to the community.

Pharmacology of Veratrim.—H. C. Wood, Jr., Philadelphia (*Journal A. M. A.*, December 22), questions the propriety of placing the two plants, veratrum viride and veratrum album, together under one head in the Pharmacopeia. He has been long impressed with the irregularity of the action of veratrum viride, and hence of the desirability of employing its active principle, were that possible. He reviews the facts that seem established as regards its alkaloids and their action, and concludes as follows: "1. Neither veratrin nor rubijervin are present in veratrum viride root in sufficient amount that they can in any degree be held responsible for the activity of the drug. 2. Protoveratrin, although an extremely poisonous substance, differs essentially in its effects from the veratrum rhizome, and, therefore, is not to be considered its active principle. Moreover, the proportions of it are too small to permit of its being considered the toxic ingredient. 3. Of the known proximate principles, jervin most nearly corresponds in its physiologic action to the crude drug, but is present in too small amount in proportion to its toxicity to be considered the chief active ingredient. 4. The evidence, therefore, seems to me conclusive that there is in veratrum viride some active substance as yet undiscovered."

The Canadian Journal of Medicine and Surgery

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Editorials.

PROTECTION OF INFANT LIFE IN THE PROVINCE OF ONTARIO.

ACCORDING to the thirty-fifth annual report of the Registrar-General of the Province of Ontario, 50,265 births, including still births, were registered during the year 1904. This represents a birth rate of 22.8 per 1,000 of population. As an offset 4,461 infants, or 8.87 per cent., of the births died under one year of age,

of malformations and diseases of infancy. Under this head are grouped congenital malformations, still births, congenital debility, icterus, sclerema, and other diseases peculiar to infancy. As other offsets, 192 infants under one year perished of communicable diseases—typhoid fever, measles, scarlet fever, whooping cough, diphtheria, influenza, variola; 645 died of diseases of the nervous system—encephalitis, meningitis, epidemic cerebro-spinal meningitis, convulsions; 13 died of diseases of the circulatory system, including diseases of the heart and hemorrhages; 625 died of diseases of the respiratory system—croup, bronchitis, broncho-pneumonia, pneumonia, congestion and apoplexy of the lungs. The highest mortality among this class was caused by diseases of the digestive system, including diarrhea, enteritis, and cholera infantum. In all, 6,902 infants, or 22.5 per cent. of the total mortality for the year (31,292) perished. Of the 6,902 deaths, 64.64 per cent. are ascribed to malformations and diseases peculiar to infancy, 35.36 to the different diseases, most of which have been specified above.

At page 8 of the report it is stated that a high death rate in the town of Hawkesbury (28.3 per 1,000) corresponded with a high birth rate (64.3 per 1,000), and was due to increased infantile mortality. With a population of 4,198, there were 270 births and 119 deaths in Hawkesbury last year. Of the 119 deaths, 11 were still births, and of the remaining 108 deaths, 49, or 45.3 per cent., were of infants of one year and under, and 18, or 16.6 per cent, were of children under ten years of age. The following remarks are made: "It will thus be seen that in this town alone there is much to be done along the line of the education of the parents, particularly the mothers, in the care and raising of infants, for many of the 49 deaths of infants under one year, I am certain, would have been prevented if the parents had only known how to rear their babies."

Although mention is not made of the diseases which carried off the 49 infants in Hawkesbury, one is led to infer that in some instances they were communicable diseases—measles, whooping cough, scarlet fever, which might have been prevented by quarantine; in others, diphtheria, which also might have been prevented by quarantine, or cured by the prompt administration of serum. We understand, however, that particular reference was intended to be made to diarrhea, enteritis and cholera infantum—diseases

occurring in hot weather among bottle-fed babies. The death of a bottle-fed babe put out to nurse is ascribed, rightly or wrongly, to the carelessness, cruelty or ignorance of its commercial foster mother. Carelessness and ignorance were probably responsible for some of the deaths of the Hawkesbury infants, whose mothers, being in some cases mill-hands, had absented themselves from home and neglected their babies. Cruelty could not be charged, unless we inveigh against the cruelty of each and every mother who for any cause, except dire necessity, weans her babe prematurely.

With the advent of hot weather, a large death rate among children is commonly expected, and this death rate is very largely limited to the very early age periods and to children fed on cow's milk. During the last siege of Paris, in 1870, the infant mortality in that city was reduced to a half of its yearly average, although the general death rate was doubled. This unusual condition was attributed, no doubt correctly, to the fact that the mothers were obliged to nurse their infants at the breast, when they could, on account of the great scarcity of cow's milk and other foods. Breast feeding of the young infant should be continued, whenever it is possible, during not less than the first ten months of infantile life.

It would be a good thing if a woman inspector were appointed by the Ontario Government to act as an instructress of inexperienced mothers. Such an official, in lectures delivered before women's clubs, could instigate the banishment of the long-tube feeding bottle from pharmacies; could teach the mothers, or women who would bring the news to them, to boil the nursing bottles and nipples every day; to boil the milk and the water given the baby during the hot weather; to clothe the infant properly, and see that it gets plenty of fresh air.

A general diffusion of such elementary ideas among nursing mothers and nurses would help to lessen the mortality of infants under one year from diarrhea and enteritis in Ontario. On the other hand, however, if healthy women of the working class, or any class, refuse or neglect to wet-nurse their babes, no amount of hygienic lecturing or advice will prevent a very considerable mortality of their infants, under one year, from diarrhea and enteritis. J. J. C.

THE LATE DR. W. H. DRUMMOND.

J. W. Bengough has composed the following appreciation of Dr. Drummond's works, written after the doctor's own style, entitled "The Habitant's Lament":

Jus' w'en de Spring she's comin',
An' leetle bird is gay,
An' Winter storm an' hice an' snow
Has no excuse for stay;
Jus' w'en de whole worl' lookin'
So you can't find no fault—
Dat's when de bad news she'll arrive,
De bad news on Cobalt!

No; dat has nottin' 'tall for do
Wit news of silver mine;
De prospec' for get monee dare
It's mebbe seem ver' fine;
I spik' not of such subjec', me,
But bow it down my head,
For Poet of the Habitant
Dat's lyin' sick on bed.

De man w'at mak' some leetle book
Wit' verse 'bout Papineau,
De Julie Plante de Rossignol,
An' Jean Baptiste Trudeau,
An' manny more—de man w'at write
De sam' way lak' we spik;
De bad news come on Cobalt,
Our frien' is now ver' sick.

Some verse 'e write for mak' de fame,
An' some for bring de tear;
But Drummond, 'e is our good frien'
Always for plentee year:
'E's Protes-tant, but all de sam'
At Mass w'en we 'av kneel,
De Cure 'e will pray, Bon Dieu
For sure to mak' im well.

Dr. Drummond, born at Currawn House, County Leitrim, Ireland, in 1854, entered into rest at Cobalt, Canada, April 1907. With the exception of a few of his earlier years, his life was spent in and around Montreal, but the whole of the people of America mourn as they realize that the book of his life "has closed over, for all the lessons are said"—how well said as physician, friend, compatriot and sportsman all know, but best of all as the true singer of the heart songs of a people whom he loved and whom he has taught all to look at with his brotherly eyes, and to welcome,

with him, into the big Canada we call home, little "Dieu Donne":

No, sir! I can tole you, if you never know before
W'y de kettle on the stove mak' such a fuss,
W'y de robin stop hees singin' an' come peekin' t'roo de door
For learn about de nice t'ings come to us;

An' w'en he see de baby lyin' dere upon de bed,
Lake leetle Son of Mary on de ole tam long ago,
Wit' de sunshine an' de shadder makin' ring aroun' hees head,
No wonder M'sieu Robin wissle low.

An' we can't help feelin' glad, too, so we call him Dieudonne,
An' he never cry, dat baby, w'en he chrissen by de pries';
All de sam' I'll bet you dollar he'll waken up some day
An' be as bad as leetle boy Bateese.

Who fails to smile as the poet doffs his hat to "De Nice Leetle Canadienne":

You can pass on de worl' we'erever you lak,
Tak the steamboat for go Angleterre,
Tak car on de State, an' 'den you come back,
An' go all the place, I don't care—
Ma fren', dat's a fack, I know you will say,
W'en you come on dis countree again,
Dere's no girl can touch w'at we say every day—
De nice leetle Canadienne."

Another inimitable bit, called "Pride":

Ma fadder he spik to me long ago:
"Alphone, it is better go leetle slow.
Don't put on de style if you can't afford,
But satisfy be wit' your bed an' board.
De Bear wit' hees head too high alway,
Know not'ing at all till de trap go smash,
An' mooshrat dat's swimmin' so proud to-day
Very often to-morrow is on de hash."

Edward de Seven of Angleterre
An' few oder place beside,
He's got de horse an' de carriage dere
W'enever he want to ride.
Wit' sojer in front to clear the way,
Sojer behin' all dress so gay,
Ev'ry wan makin' de grand salaam,
An' plaintee of ban' playin' all de tam.

An' dere's de boss of United State,
An' w'at de call Philippine,
De Yankee t'ink he was somet'ing great
An' big as de king or queen.
So dey geev' heem a house near touch de sky,
An' paint it so w'ite it was blin' de eye,
An' long as he's dere beginnin' to en'
Don't cos' heem not 'ing for treat hees frien'.

So dere's two feller, Edouard de king
An' Teddy Roos-vel' also,
No wonder dey're proud or dey got few t'ing
Was helpin' dem mak' de show.
But, oh, ma Gosh, w'en you talk of pride,
An' w'at dey call style an' puttin' on side,
W'ere is de man can go before
De pig-sticker champion of Ste. Flore ?

In the "Habitant's Jubilee Ode" he touches the patriotic chord:

An, onder de flag of Angleterre, so long as dat flag was fly,
Wit' deir Englis' brother, des Canayens is satisfy leev an' die,
Dat's de message our fader geev us w'en dey've fallin' on Chateauguay,
An' de flag was kipin' dem safe den, dat's de wan we will kip alway !"

A beautiful little poem is "The Last Portage":

I'm sleepin' las' night w'en I dream a dream.
An' a wonderful wan it seem,
For I'm off on de road I was never see
Too long an' hard for a man lak me,
So ole he can only wait de call,
Is sooner or later come to all.

An' off in front of me as I go,
Light as a dreef of de fallin' snow.
Who is dat leetle boy dancin' dere?
Can see hees w'ite dress an' curly hair.
An' almos' touch heem so near to me,
In an' out dere among de tree.

An' den I'm hearin' a voice is say,
"Come along, fader, don't mind de way,
De boss on de camp he sen' for you,
So your leetle boy's going to guide you troo,
It's easy for me, for the road I know.
'Cos I travel it many long year ago."

An' I foller it on, an' wance in a w'ile
He turn again wid de baby smile,
An' say, "Dear fader, I'm here, you see,
We're both togedder, jes' you an' me ;
Very dark to you, but to me it's light;
De road we travel so far to-night."

And so he sings on, and so we listen 'mid smiles and perhaps a tear, and cherish the gift he has left us. Nothing remarkable, almost commonplace, many say. Something less than a genius, perhaps, but as the years roll on, something more than a stringer of rhymes; perchance the man who saw visions and dreamed dreams, who pictured to himself a great future and a great nation of one people and one tongue—Canada—and so he sang of the common lot of all, the everyday joys and sorrows drawing together

the stepchildren by a clearer understanding of the lives of each, and uniting them by the sympathy of a heart-beat.

He rests—and nothing more fitting could have been chosen to engrave upon his casket than one of his favorite quotations:

> "And falling, fling to the hosts behind;
> Play up, play up, and play the game."

W. A. Y.

PROFESSOR FRIEDRICH MULLER'S VIEWS ON NEPHRITIS.

In an address delivered before the Toronto Medical Society, April 5, 1907, at the new Medical Building, Prof. Friedrich Müller, Munich, Germany, expressed his views on the subject of nephritis, a brief abstract of which is here presented:

The Professor held that the lesions which produced functional and organic breakdown of the kidneys were brought about by toxins of different kinds—lead, alcohol, oxalic acid, in the chemical group; tuberculin, diphtheritic toxin, toxin of scarlet fever, in the organic group. The prognosis of nephritis depended on the etiology; in many cases being favorable, in others not so favorable. It was of great importance to know the exact history of an attack of nephritis when deciding as to what class it may belong—acute or chronic. The beginning of the attack is the main thing to know; if it begins acutely, it belongs to the acute category.

Chronic nephritis is generally divided into two classes: the interstitial and the parenchymatous. The lecturer contended that it was easy to diagnose these pathological conditions post-mortem; but that a clinical diagnosis was by no means an easy task. He thought that true interstitial nephritis was not confined to the tubuli uriniferi; but that it extended to the parenchyma as well, after a lapse of time.

In true parenchymatous nephritis from infection, v.g., typhoid fever, the kidneys undergo restoration after the disease has reached a favorable termination. If a poison, such as gout, acts on the canaliculi for a series of years, inflammation of the interstitial tissue of the kidneys follows. Scars are formed in the kidneys as the result of inflammation in them, and the kidneys become contracted ultimately, but never as the direct outcome of a primary interstitial inflammation.

The large white kidney is due to the constant action of some toxin which continues to act for a long period of time.

Chronic granular kidney is the result of an acute nephritis, starting from, v.g., scarlet fever, the renal tissues being spoiled and remaining so, just as, after pneumonia, the lung tissues may remain damaged for life.

The proper function of the kidney is to eliminate water from the body. In this respect elimination of water from the kidneys differs from perspiration, the chief object of which is to lower temperature. An individual does not perspire because he has drunk too much water; the kidneys discharge water freely when a large quantity of water has been drunk.

Edema ensues when the kidneys have lost the power of eliminating water. Urinary salts, such as the chlorides, remain in the body when the kidneys are unable to excrete them. When a toxin is acting on a renal blood vessel, polyuria may ensue. A clinician cannot say whether a certain anatomical condition of the kidney will produce polyuria or oliguria.

The toxin which produces eclampsia in a pregnant woman proceeds from the infant. The toxins of gout will produce gouty nephritis, and diabetes may result from such a condition of the kidneys.

Toxins of all kinds are specially discharged from the body through the kidneys. A sound condition of the kidneys is of great importance in the treatment of any diseased condition in a patient; pneumonia becomes grave if it is complicated with nephritis.

In uremia, the blood pressure becomes enormous, as revealed by the sphygmograph: this change shows increased work of the heart.

Blood pressure is not increased in typhoid nephritis; in tubercular nephritis it is in most cases not increased; in gouty kidney blood pressure is not notably increased, and this last condition does not tend to uremia. If, however, blood pressure should rise in gouty nephritis, the condition of the patient becomes one of danger.

Continued high blood pressure and toxemia are responsible for arteritis.

The lecturer thought that the question of nephritis should be approached from the clinical rather than the anatomical standpoint. J. J. C.

DR. EADIE'S ILLNESS.

Dr. Andrew Eadie, of 855 Queen Street West, has the united sympathy of the entire profession in Toronto and hosts of outside friends in his prolonged illness due to an unmerciful and entirely unjustifiable assault made upon him a couple of weeks ago while wheeling along Queen Street West. The man who assaulted him was a patient of his, whose child had recently died in the Western Hospital, and without just cause or reason the man became embittered toward Dr. Eadie. As a result of the attack the doctor remained in a semi-conscious condition for over ten days, and though recovering slowly at time of writing, is still in a critical condition. May he speedily recover.

EDITORIAL NOTES.

Treatment of Bronchitis.—Common subacute bronchitis causes the desquamation of the bronchial epithelium, which is the best shield the bronchial mucous membrane has against infections, particularly the infection of tuberculosis. Hence the necessity of carefully treating even slight attacks of bronchitis, particularly if they occur in patients exposed to contamination in hospitals, workshops, schools, crowded buildings and cities. In a case of bronchitis, when there is an abundant or a muco-purulent expectoration, when the temperature rises above the normal, particularly at night, when the general condition of the patient is unfavorable, when there is some lack of clearness in the respiratory murmur, particularly at the apices, with disseminated rales and friction sounds at the bases of the lungs, an energetic treatment is called for. Creosote, administered in a suitable vehicle, rapidly dries up the bronchial secretions, brings about the repair of the damaged bronchial epithelium, lowers the fever, and restores appetite. Creosote does not coagulate albumin. It is antiseptic, styptic, anesthetic and escharotic. Chemically pure beechwood creosote is extensively used in pulmonary tuberculosis. The phosphite of creosote is recommended by Dr. Bertheim, editor of the *International Review of Tuberculosis.*

The Bromides in Therapeutics.—Dr. P. Hartenberg, in an article recently published in *La Presse Medicale*, says that practitioners should be cautious in prescribing the bromides for some patients. The state of the nutrition of the patient should be the physician's guide in this respect, for the bromides exercise a depressing effect on the organism and lessen the elimination of urea and phosphoric acid. They should not be ordered for neurasthenic or hysterical patients, who are already suffering from depression and in whom nutritive processes are slow. On the other hand, the bromides act most effectively when administered to patients suffering from agitation, over-excitement, palpitation, spasms, precordial distress, etc, if the nutrition of the nervous system and the general nutrition be satisfactory. The combination of the bromides of ammonium, sodium and potassium, known as triple bromides, appears to be the most efficacious.

Experiments Proving Infection from Tableware.—In *Rev. d. Hyg. et de Police Sanit.* 1907, Vol. XXIX., No. 1, p. 60, Dr. Cristiani, Professor of Hygiene in the University of Geneva, has reported the results of some experiments, showing how infection may be communicated from glasses, forks, spoons and other articles of tableware. A drop of one-tenth dilution of a bonillon culture of bacillus prodigiosus was placed on the experimenter's tongue, and then, by movements of the tongue, diffused through the buccal cavity. The experimenter then going through the motions of drinking, carried to his mouth sterilized glasses, which were afterwards used to infect Petri dishes, by simple contact of the edge of the glass with the jelly. Under these conditions the result of the sowing of the bacillus prodigiosus was always positive. If, however, after the infectious contact the glass was washed with a large quantity of cold water and carefully wiped, as is done in laboratories, the sowing remained negative, or only a few isolated colonies developed. Even if the glass was only rinsed in a basin containing cold water, and then wiped, as is generally done in kitchens, that is to say, very lightly, the sowing yielded, most frequently, only discrete and thinly-sown colonies. Professor Cristiani, therefore, expresses the opinion that washing glasses and dishes in lukewarm or cold water, followed by careful wiping, reduces considerably the number of germs on them, so that dishes and glassware cleaned in this manner would not, practically, cause the possible transmission of infectious diseases.

Local Treatment of Syphilitic Gummata by Injections of Iodide of Potassium.—In a recent thesis, (*Thèse*, Paris, 1906, Steinheil, editeur), Dr. J. Boisseau shows the indications, technic, and advantages of the local treatment of gummata by hypodermic injections of iodide of potassium. He contends that in the treatment of tertiary syphilis iodide of potassium exercises its greatest power when it is injected into or near the gumma, instead of being taken as a medicine by the mouth. These injections may be used simultaneously with mercurials in cases in which the iodide cannot be taken by the mouth. They may be substituted for general mercurial or general iodide treatment, when the patient cannot endure either the one or the other, owing to bad teeth or renal insufficiency. They ought also to be tried in cases of syphilides or gummata which resist general treatment. The local method of using iodide of potassium can, of course, only be used in cases of cutaneous gummata. A weak solution (3 per cent.) is sufficient, and causes very little pain. The injection may be made painlessly by adding guaiacyl calcium to the iodide of potassium solution. An ordinary hypodermic syringe, capable of holding 2 cubic centimetres (33 4-5 m.) will answer. The platinum needle should be 2½ centimetres (1 inch) long. The skin over the gumma and the neighboring parts having been aspeticized, the needle is thrust into the healthy skin a short distance from the gumma. Drs. Besnier and Radcliffe-Crocker push the iodide injection into the gumma. Dr. Boisseau and others advise that the solution be pushed into the cellular tissues around the gumma. The syringe at first is empty, and the operator uses it as an aspirator to see if a blood vessel may have been punctured. The same syringe, after being detached from the needle, is filled with two cubic centimetres of the iodide of potassium solution, which are then slowly injected. The injections may be given every day or every second day. By pricking a different part each time the needle is used, the gumma may be circumscribed, little by little. These injections never cause iodism. They are efficacious, and act rapidly. In doubtful cases they may be used for diagnostic purposes, especially when mercurials are contra-indicated.

The Optional Disease.—Smallpox has been dubbed by Dr. W. F. Reilly, Chicago, "The Optional Disease," meaning thereby that no one need have it if he does not want it. A good many people in Canada who should know better, protest that they want

to be protected against smallpox, but still refuse to accept the gift of Jenner. They disclaim any notion of wanting to trifle with smallpox; would not take it if escaping it depended on good moral behavior; but when it comes to a little sore on the arm they think that the price of protection is too high, and refuse to accept it. Experience gained by physicians the world over proves that, if people have been successfully vaccinated and revaccinated until the susceptibility to vaccine is exhausted, they need not fear exposure to a case of smallpox. In some individuals susceptibility to smallpox itself is hard to eradicate. The writer of this note saw, in 1866, a man who had discrete smallpox at the Toronto General Hospital, and the man's face was pockmarked from smallpox contracted by him ten years before at Alexandria, in Egypt. If he had not had smallpox in Egypt and had only been vaccinated while living there, he might have denied the efficacy of vaccination when attacked with smallpox at Toronto. Such an experience as his is, however, exceptional, and one attack of smallpox usually confers a life-long immunity to that disease. Is it reasonable to ask that Jenner's protection should exercise more immunizing powers than genuine smallpox can give? Vaccinated physicians and medical students in many cities of the United States and Canada visit and attend to smallpox patients and do not contract the disease. What better evidence of protection can be asked for? An editorial writer in the *Globe*, Toronto, March 19, 1907, asks: "If vaccination is really a preventive of smallpox, if it lessens the intensity of an attack that it does not prevent, and if it is attended with any serious measure of danger?" A century ago such questions were quite right; now they are somewhat suggestive of Rip Van Winkle. Even the watchful care of the best of health officers will not ward off the insidious approach of smallpox, which may lurk in manuscripts. Should the editor of the *Globe* decline vaccination, and should he catch smallpox, he may solace himself with the old saw, "There is no accounting for tastes," and on reflection he will be forced to confess that in his case also smallpox was an optional disease.

Treatment of Hemoptysis with Amyl-Nitrite.—Dr. Francis Hare, of Brisbane, maintains that the treatment of hemoptysis by amyl nitrite inhalation has obvious advantages. In hemoptysis there is a highly vicious circle in operation. The intrapulmonary irritation of effused blood causes cough; coughing, like any other

sudden exertion, causes rise of blood pressure; rise of blood pressure causes fresh bleeding, and so on. The circle continues to revolve in many cases until the loss of blood has been sufficient to reduce blood pressure materially and thus end the hemoptysis. This natural cure was at one time imitated by physicians, who resorted to the lancet. The treatment by amyl nitrite is another imitation, less complete, but possesing the advantage of economizing the patient's blood. The circle is broken at the same point and by the same process, namely, reduction of general blood pressure; but, the blood being saved, the procedure may be repeated as often as necessary. Amyl nitrite causes no interference with cough; it is influx of blood to the ulcerated lung tissue which is stopped, not its efflux from the bronchial tubes. Consequently blood already effused is rapidly cleared away, and retention and subsequent septic pneumonia obviated. The treatment is safe, easily and rapidly applied; hence, in the absence of professional supervision, it can be used by the patient. Dr. Hare sums up the matter by stating that of sixteen attacks of hemoptysis occurring in nine consecutive cases (eight tuberculous, one mitral) and treated by amyl nitrite inhalation, all save one ceased within three minutes; in the exception, cessation was delayed for ten minutes. Dr. Hare considers it a matter for surprise that the freedom from hemorrhage conferred by a drug, the influence of which is so fleeting, should last so long, as seems to be the case. One would be inclined to say that in Dr. Hare's cases the hemorrhage proceeded from a congested area and was limited, a class of cases in which the patient gets well if kept absolutely quiet. In such cases Dr. Osler advises rest, reduction of the blood pressure by minimum diet, purging, if necessary, and the administration of opium to allay the cough.

Influence of Infantile Mortality on the Total Mortality Rate of a Province of Canada.—In Canada, by the decennial census of 1901, the total deaths from all causes aggregated 81,201, a rate of 15.12 per 1,000 of population. The total mortality under one year was 21,328, or 26.26 per cent. of the total mortality of Canada. In Ontario, for 1901, the total deaths from all causes aggregated 33,272, a rate of 15.24 per 1,000 population. The total mortality under one year in Ontario was 6,697, or 20.12 per cent., of all the deaths for that year. In Quebec, for 1901, the total mortality from all causes was 30,570, a rate of 18.54 per

1,000 of population. The total mortality under one year in Quebec was 11,449, or 37.45 per cent. of all the deaths in Quebec for that year. The following table shows the facts:

A. D. 1901	Total Deaths under one year of age.	Percentage of the total mortality.	Population.
Canada.....	21,328	26.26	5,371,315
Ontario.....	6,697	20.12	2,182,947
Quebec.....	11,449	37.45	1,648,898

Thus the mortality of infants under one year of age, for 1901, in Quebec, was a good deal more than one-half the infantile mortality under one year of age in all Canada, as per table. The high general mortality rate in Quebec, viz., 18.54, is influenced by the high infantile mortality rate, which may be gathered from the following calculation: Deduct the mortality under one year, viz., 11,449, from the mortality from all causes, viz., 30,570—the remainder is 19,121, which, divided by the Quebec population, gives a mortality rate of 11.57 per 1,000 for Quebec. Apply the same test to the Province of Ontario: Deduct the mortality under one year, viz., 6,697, from the mortality from all causes, viz., 33,272—the remainder is 26,575, which, divided by the Ontario population, gives a mortality rate of 12.17 per 1,000. Apart, therefore, from the high infantile mortality rate, Quebec had a more favorable general mortality rate than Ontario in 1901.

Loss and Gain in Children Under 4 Years of Age in Quebec and Ontario.—By figures taken from the Canadian decennial census of 1901, it appears that the total tubercular mortality of Canada was 9,709. Of these deaths, 1,303, or 13.42 per cent., were of children under four years of age. The total tubercular mortality of Quebec was 3,373. Of these deaths 664, or 19.68 per cent. were of children under four years of age. The total tubercular mortality of Ontario was 3,544. Of these deaths 232, or 6.54 per cent., were of children under four years of age. The relatively high birth rate of Quebec is coincident with a tubercular mortality among children under four years of age in that province almost three times as great as that which is recorded in Ontario. In return, however, Quebec, with a population of 1,648,898 in 1901, had 45,351 living children under four years of age; Ontario, with a population of 2,182,947, had 47,235. By simple proportion Ontario should have had 60,038 living children under four years of age, thus showing a clear deficit in child life of 12,803—quite a small army. Our readers can make their own deductions.

J. J. C.

News of the Month.

McGILL UNIVERSITY FIRES.

The second disastrous fire within two weeks visited McGill University at an early hour on April 16th, and practically destroyed the Medical Building, one of the oldest and most valuable of the splendid collection on the college grounds.

The results of the fire were most disastrous, as in addition to the usual equipment of a college medical building, the museum, one of the best on the continent, was destroyed. The loss in this cannot be considered in money value, as the museum has been collecting for nearly three-quarters of a century, and contained many absolutely priceless specimens.

The magnificent Medical Library, however, was saved, and this is no small comfort to the University authorities, as it contained many works as valuable in their way as the collection in the museum.

Money cannot spell the loss which will be caused to the University by this second disaster, but a conservative estimate, made while the fire was raging, by one of the professors, estimated the damage at nearly half a million, with a strong probability of it running far beyond that. The amount of insurance is not known just now, but in such a disaster insurance is a mere detail. Money cannot compare with the actual loss.

How the fire originated is not known. It started in the centre of the building, on the second floor, where the lecture-rooms are situated, where, Dr. Ruttan stated, there had been nothing going on. The fire burned with great force. The firemen made a rapid response to the first alarm. Even in that short interval the flames had almost complete control of the centre of the group of connected buildings, and was raging as though nothing could stop it.

At first the firemen had not sufficient pressure, and the flames gained rapidly on them. Every few minutes the roar of the flames was punctuated with crashes, as though chemicals were exploding, and the crowd which had gathered ran back to a considerable distance.

The centre of the building, where the fire broke out, is described by the students as a veritable fire-trap, with a lofty hallway and lecture and other rooms all around. The roof was surmounted by a series of small domes.

The flames spread with great velocity from the second story to the roof, and within a few minutes the whole centre block was a mass of flames. Suddenly the roof fell in, the heavy domes precipitating the crash, and with a thunderous noise the whole fabric collapsed, carrying a large portion of the walls with it.

A hush followed. It was not thought possible that the firemen could have got out in time to escape the crush of beams and stone. A moment later the tension was relieved, and when the crowd realized that every one of the fire-fighters had escaped, a cheer went up as they returned to the attack.

It was evident by this time that the whole middle of the block of buildings was doomed, and the firemen devoted their energies saving the north and south wings. At one time it looked as though they were obtaining mastery, but the wind, which was blowing freshly from the northwest, swept down, and again the fire broke out with fury, gradually working its way southward towards the library and basement, where bodies used for dissection purposes were kept.

So furious had the flames become by this time that the heat within reach of the building was unbearable, and the firemen were busy playing streams on the rear roofs of houses on Milton street to keep the conflagration from spreading to them.

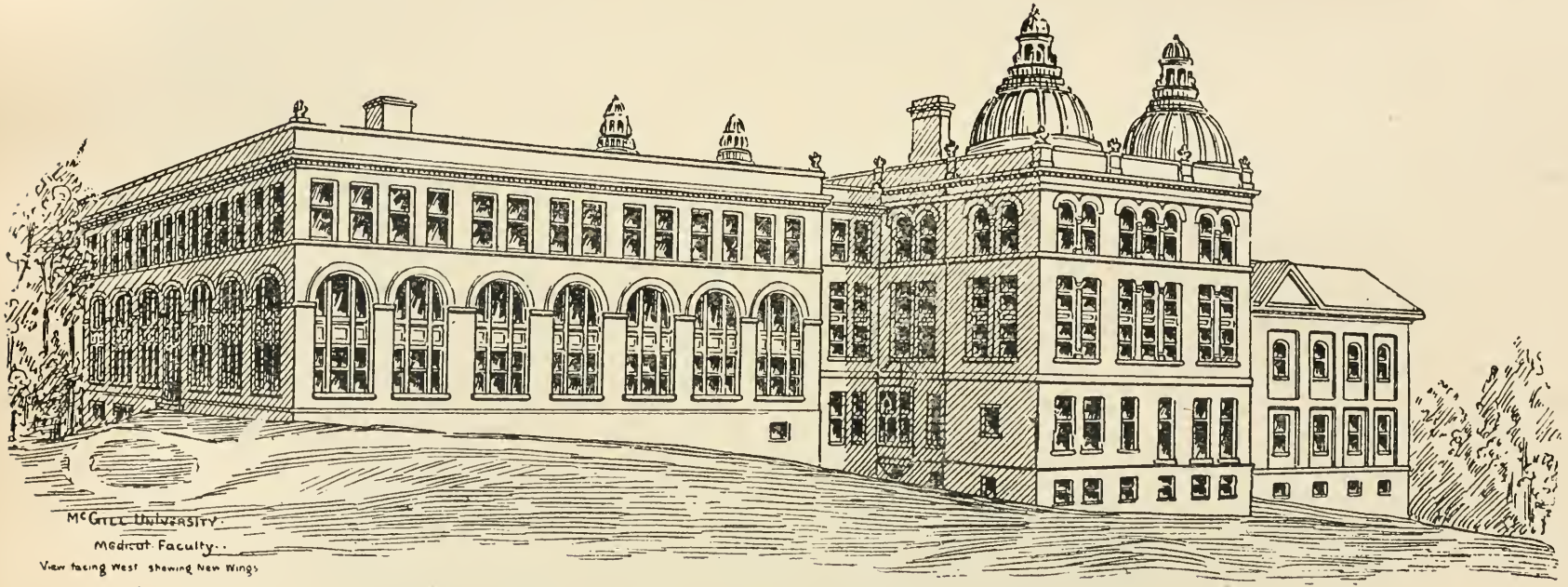
Chemicals in the Medical Building added zest to the flames. In many places the fumes of them colored the flames, while the continual mild explosions kept everyone but the firemen at a safe distance.

Immediately to the north of the older building was an annex devoted to the physiology department, and here the firemen put up a strong fight. Time after time the flames reached the building, and as often numerous streams were directed towards them, and gained the victory.

At 2.15 the fight still looked dubious, but the firemen seemed to be gaining the advantage.

What the loss by smoke and water has been no one could even guess, but it must have been heavy, as the firemen were working all through the upper floors, directing streams wherever it appeared there was danger. Their efforts were aided by the fact that the wind blew the flames in the opposite direction, so that the smoke and heat were driven away from them and left a fair field for their work. The same causes, however, drove the fire in the opposite direction.

The fire steadily spread towards the southern facade of the building, and despite the efforts of the firemen it ate its way right through, and a little after half-past two the roof of this part of the building fell in, the crash and confusion adding fuel to the conflagration. This, however, was the last big effort of the fire,



MEDICAL BUILDING, McGILL UNIVERSITY, RECENTLY DESTROYED BY FIRE.

and by three o'clock in the morning it was apparently under control, although still burning fiercely.

Dr. Ruttan stated that the most irreparable loss was that of the museum, which seemed to be a total loss. This had been collecting ever since McGill began, and contained many invaluable specimens.

The fire was first noticed by Prof. Cox, who was passing close by the building, and at first thought there was a chimney on fire. He at once turned in an alarm, and on returning was horrified to find that the small flames he had first seen had become a veritable conflagration. This was at ten minutes past one. Then alarm after alarm was turned in from several directions.

Although the main portion of the buildings were quickly destroyed, the fireproof building in which the large library was situated resisted the flames. A large portion of the books were destroyed by heat and smoke.

By three o'clock the brigade had the fire well under control, and all danger of it spreading to any of the surrounding buildings had passed. Like the fire in the engineering building on March 29th, it had gained such headway when the firemen arrived that it was impossible to save the building in which it had started, and the firemen had to concentrate their energies in preventing it from spreading.

Immediately after the disastrous fire which wiped out the Engineering Building, the University authorities, it is understood, added a half-million dollars of extra insurance on the whole University plant. The Medical Building will share in this, but it is doubtful whether the insurance will cover one-half of the actual damage.

The buildings themselves were erected at a cost of about $350,000. The collections which they contained are practically beyond all estimate as to value.

Dr. F. J. Shepherd stated that the fire destroyed for him the collection of a whole lifetime, his anatomical collection being part of the apparatus burned. The collection was famous throughout America, and with its destruction passes a chapter in the history of anatomical science on this side of the ocean.

When the building was built and remodelled some years ago it was largely through the financial assistance extended by the family of Lord Strathcona, their donations amounting to about $125,000. The University also contributed to the cost, and it was probable that the extensions cost in all about $160,000. The old building, which occupied the front site, was constructed in 1872. The upper flooring was of lead, this being on account of the presence of the dissecting done on that flat. This lead flooring kept the flames in check for a full half hour after the roof had been destroyed.

The main building of the Faculty of Medicine was erected in 1873. In 1885 and again in 1893 large additions and alterations were made. Again proving to be inadequate, a thorough reconstruction and enlargement of the buildings had lately been completed. The alterations and extensions consisted of three wings, the first one a laboratory wing, which occupied the northeast corner of the block of buildings, and replaced what was formerly the pathology wing. A second wing connected this with the front building on the east, and the third wing connected the second block with the original building on the west side. The central wings extended east and west about seventy feet, and formed the central feature of what was a symmetrical block of stone buildings.

The Medical Building stood four storys high, except in the front block, where the three original storys remained. The total length of the buildings was 280 feet, and the maximum width 145 feet. Its cubic capacity was about 1,750,000 cubic feet, making it the largest building in the University's campus.

The cause of the two fires at McGill University within a month has occasioned considerable discussion in local fire insurance circles. The most generally accepted idea is that they must have been caused by defective electric wiring. In both instances the fire started in the upper storys, and could not have been attributed to the furnace in any way.

The mysterious origin of both fires and the unusual hour at which they started—the first about five o'clock and the last one at one o'clock in the morning—causes some people to think that they may not have originated by accident. Unless due to a disordered mind, the professors and students can hardly conceive of anyone being so vindictive as to burn up two valuable buildings, entailing a loss of over a million of money and the destruction of collections of models and specimens priceless in value. Still, it is pointed out that it would not be a very difficult matter for some one to conceal himself in any of the buildings until everyone had departed at night and then start a fire, afterwards escaping through a window.

The fact that there were no night-watchmen in either building making rounds every hour, as in most commercial houses, would render it easy for anyone so inclined to set the places on fire. If the result of the fire-brand of an incendiary, the only hpothesis is that some student's mind may have become unhinged through hard work or fear of failure.

CANADIAN NURSES ORGANIZE.

A MEETING was held at the Hospital for Sick Children recently when a Canadian Society of Superintendents of Training Schools for Nurses was organized. Letters had been sent out seeking and the majority were heartily in favor of the proposal. At the meeting there were representatives present from Galt, Belleville, Collingwood, St. Catharines, Ottawa and Stratford.

The following officers were elected: President, Miss Snively, General Hospital, Toronto; First Vice-President, Miss Livingston, Montreal; Second Vice-President, Miss McFarlane, Vancouver; Secretary, Miss Brent, Hospital for Sick Children, Toronto; Treasurer, Miss Meiklejohn, Lady Stanley Hospital, Ottawa.

A provisional constitution was framed, and the following Council was appointed: Miss Macdonald, Victoria Hospital, Halifax; Miss Wilson, General Hospital, Winnipeg; Miss McIsaac, General Hospital, Edmonton; Miss Monlong, Jeffrey Hale Hospital, Quebec; Miss Patten, Grace Hospital, Toronto; Miss Sharpe, Woodstock; Miss Stanley, Victoria Hospital, London; Miss Green, General Hospital, Belleville; Miss Scott, General Hospital, Kingston; Miss Chesley, St. Luke's Hospital, Ottawa.

It was decided to hold the first meeting at Montreal on September 11th, next year.

REUNION OF OLD TRINITY MEDICAL COLLEGE.

THE spirit of old Trinity Medical College was revived, with all its old-time vigor, at the banquet held Monday evening, April 1st, at McConkey's, King Street, Toronto.

The loyalty and enthusiasm of the graduates was unquestionably demonstrated by the large gathering of men from points throughout the Dominion and the United States to do honor to their Alma Mater and extend the glad hand to their fellow-students of the old school.

About 150 graduates and the final class to take the degree of M.D., C.M., viz., those who registered with Trinity prior to amalgamation and are completing their studies at Toronto University, assembled in the spacious banquet hall, which was elaborately decorated with the old colors, flags, bunting, flowers, etc.

From the time of assembling till the singing of "Auld Lang Syne" in the wee sma' hours of the morning, every moment was the scene of glad fellowship in speech and song, and revival of the old-time college yells and songs, which, though dormant in the breasts of her sons for many years, came forth with the old-time vigor, as though it had been but yesterday they sat in the school on Spruce Street.

The honorary chair was filled by Dr. W. B. Geikie, and the honorary vice-chair by Dr. G. Algernon Temple.

The chair was taken by G. H. Worthington. Dr. Frederick Marlow, in an able manner, performed the duties of toastmaster. opinions as to the advisability of forming such an organization,

The Toast List.

"The King" was honored as it always is.

"The Ladies," proposed by Dr. C. B. Shuttleworth, who, as bachelors can, exalted the good qualities of the ladies, and said he was glad to see this important toast occupy one of the first positions on the list. On behalf of the ladies, Dr. E. Stanley-Ryerson and Dr. Bradley responded in a most humorous and complimentary manner.

"Canada" was proposed by Col. "Dr." J. T. Fotheringham, who referred to the growth and wonderful resources of our country, but emphasized that we should not forget that we were but a part of a great Empire. Dr. Fotheringham spoke of the many pleasant associations of old Trinity, and the pleasure it gave him to be present at such a successful function.

Dr. G. Sterling Ryerson responded to the toast of "The Empire," and after expressing his pleasure at being present and his appreciation of the successful efforts of the committee who had the banquet in charge, he said that the scene was inspiring, one which awakened old memories of former triumphs in the history of Trinity Medical College, and one as little like an institutional funeral as could well be imagined. It was an evidence of the love of Trinity graduates and undergraduates for the old school. Though the college was now being digested by the University of Toronto, neither the "digester" nor the "digestee" felt pain—only regret. Trinity men were loyal to their stepmother, but looked back with love to their own mother. Trinity Medical College had reason to be proud of her record. Wherever the Union Jack flies her graduates were to be found doing noble service for humanity and reflecting credit on their Alma Mater. Nor were they less successful under the Stars and Stripes. Referring more particularly to the subject of the toast, he rejoiced in the awakening of the Canadian national spirit. He was pleased to observe the feeling of confidence in the future of the country, of pride in her glorious past and contentment with her present. He predicted that men now living would see twenty million souls peopling the country, and that with the enormous productive power of the land, of her mines, the innate qualities of her people and her strategic position in the Empire, she would play a great part in the future history of the world.

"The Medical Profession" was proposed by Dr. R. J. Dwyer. In proposing the toast to the medical profession, the Doctor

took occasion to exalt the honorable calling of the medical practitioner. Their work was and should be, said the Doctor, for the relief of suffering humanity, rather than the monetary compensation.

This toast was responded to by Drs. A. E. and A. P. Ardagh, of Orillia, and Dr. Brien, of Essex. These gentlemen, in the eloquent and kind words they said about their chosen vocation, brought forth round after round of applause. They enumerated many of the trials and struggles of the practitioner, and spoke of the effort they had made to be present at the reunion, which gave them unbounded pleasure. They hoped the function would be perpetuated and made an annual event.

"Old Trinity Medical College" was proposed by Dr. Bird, Gananoque, Ont. Dr. Bird spoke of the splendid course that had been provided in medical education by old Trinity, and reviewed the many pleasant associations he had formed while at the old school.

When Dr. W. B. Geikie, "the Dean," rose to respond to this toast the reception accorded him demonstrated a pent-up desire bursting forth from the hearts of the graduates to do honor to their old chief.

Dr. Geikie spoke as follows:

He thanked those who had invited him as a guest to the splendid reunion of Trinity Medical College graduates—the second of the kind which had been held. He was always delighted to meet the graduates of *the old college he had loved* with his whole heart. He spoke of some of the causes of the phenomenal success of the college for the thirty-two years it had lasted, which gave it a high position amongst the best teaching medical colleges of Canada. He exhibited the original paper, dated 1871, in his handwriting, which suggested the establishment of the college. This stated, first, that it should be established on such a basis as would ensure its success from the outset, by placing men of established reputation as medical teachers in the principal chairs, ready to work hard and enthusiastically.

The suggestions made were acted upon and the college established in 1871, early in the spring. Its first work was to hold examinations—primary and final—as many applications had been received from candidates for these examinations, as soon as the Medical Faculty was appointed. The following well-known names, Dr. Osler, Regius Professor of Medicine, Oxford, England; Dr. Peter Macdonald, M.P., Deputy Speaker of the House of Commons, and Dr. Angus Mackay, ex-M.P.P., of Ingersoll, were amongst the primary examination candidates. In 1872 Dr. Logan More, of Brandon, and Dr. Peter Macdonald were our first gold and silver medalists.

The college was well received by the public and the profession at once. It was immediately fully recognized by all the Royal Colleges of Physicians and Surgeons in Great Britain and Ireland. This gave it every privilege enjoyed by any colonial medical college in Great Britain.

Great care was always taken in conducting correspondence with intending medical students, and a real interest felt in their welfare and progress. The entire curriculum—primary and final —was made *practical*. No subject of any value was omitted, while minor subjects were not allowed to encroach upon the time required for the chief subjects. It was the ambition of the college to send out *well-taught men only* in the work essential at the bedside, in diagnosis, prognosis, and treatment.

The result of this policy is seen to-day, for, as a rule, wherever our men settled they were successful. We were careful not to *subdivide* the subjects taught into *fragments*. This greatly lessens the interest of teachers and students alike. Enthusiasm in teaching and in learning is essential, and to secure this a fair amount of teaching should be given to every good teacher. *Second, third* and *fourth* class teachers should have no place in any medical college. Good teachers can no more do themselves justice, where a fragment of a subject only is allotted to each, than a golf player or a curler could play either game in a space of a few square feet, or a game of billiards on a bagatelle board. To each teacher in Trinity Medical College his subject was assigned, and he was expected to know it and to teach it thoroughly. If this was not done, a change would not be long delayed. The didactic and clinical teaching of the college were both full. As our curriculum was based on those of the best colleges in Great Britain, this was highly important. Some teachers undervalue *didactic* teaching, and say that there cannot be too little of this. If such courses be *poor,* they cannot be too short, but if *good,* as *they should always be,* the fuller they are are better for all good students. It is said men can read up much of this work. They *could* do so, but in the great majority of cases they *won't*. Nothing prompts men to read fully so much as good didactic teaching, for they are thus enabled to get fifty per cent. more good from the clinics they are required to attend. A good lecture on any subject encourages those who hear it to read on the subject, and this holds good, in a special degree, of medical subjects. Dr. Geikie quoted Prof. MacKendrick, of Glasgow, a splendid teacher, giving his rule as to practical teaching on his subject, physiology. In his farewell lecture he told the class "that it had been his rule to remember that the great majority of those present were studying physiology, not to be *physiologists*, but to be *medical men*. He therefore aimed to teach the students the broad essentials of the subject required by medical practitioners, and he avoided the tendency to wander off

into the seductive paths of pure physiology." This was well and wisely put. In Trinity Medical College the men in every part of their course were taught what was most necessary for medical men to know at the bedside. This soon became widely known, and led to her graduates being much sought after and highly prized.

Fifty-one consecutive years' connection with medical education —for, being still an examiner, I am not entirely out of it—enables me to speak with the utmost confidence on these important points. Our college, entirely at her own cost, was able to occupy good buildings—to add largely to them, more than once—to equip her well in every department, and to add to this yearly; to provide excellent lecture-rooms and laboratories, these being also improved year by year, and a very good museum, creditable to any medical college, filled with specimens of all kinds, as aids to teaching the various subjects. Professor Allbutt, of Cambridge, England, who a few years ago went through the college, was highly pleased with everything he saw, saying that it was in every way most creditable.

Above all, we educated some 2,000 doctors, the peers of any in Canada. We have a list of 196 gold and silver medalists, besides a long list of valuable scholarships given by the Medical Faculty.

The college had also her own special Act of Incorporation, given in 1877 by unanimous vote of the Legislature. This was drawn up by Chas. R. W. Biggar, M.A., K.C., son-in-law of the late Sir Oliver Mowat, G.C.M.G., and his biographer, with what help the speaker was able to render. Mr. Biggar, who was for some years our professor of botany, said that our College Act was, so far as he knew, the best of its kind in Canada.

We went on prospering year after year. Our two last sessions, 1901-02 and 1902-03, were amongst our best, if not, indeed, the very best. This was the opinion of all the students and my own. Our college was in excellent condition financially, according to the statement of its treasurer—able to pay everyone fairly for what he did—and, I am told, it paid them much better than teachers are paid at present in some of our Ontario medical colleges.

Although for the past four years our beloved college has been but a memory, yet, in view of the splendid work done by her, and its duration, it is a very grand memory. With my intense devotion to her interests for thirty-two years, having been her dean for the last twenty-five years of her existence, and her executive officer, as far as work was concerned, during the entire thirty-two of the best years of my life, as well as her representative on the Medical Council for twenty-five years, and having been the means of setting her going in 1871, it would have been quite impossible for me to have been a consenting party to the changes of 1903, by which her name and autonomy were entirely blotted out. I had fondly hoped that the college would continue to exist as a famous medical teaching body long after I had been gathered to my fathers, but in this was bitterly disappointed. Nevertheless, if

now only a memory, she is a very dear one to me, in view of all the years of teaching I have done within her walls, and the time otherwise devoted by me to her interests, and of the many large classes of good students I had the pleasure of teaching during so long a portion of my life.

No graduate she ever taught, worthy the name, will ever forget her. The eminence many of these have attained, and the love of all her true sons for her will, I trust, for many years to come throw bright halos around her much-cherished name, and they will continue to revere that name and regard the good work she did for them during their years of student life, as an inspiration stimulating them in no slight degree while in the discharge of the many responsible duties of their profession. It is to be hoped that her sons, scattered widely over our beloved Canada, the United States and the world, will often meet, as we do to-night, and as they have done before, to think and to speak of their Alma Mater with an affection which the lapse of time can never decrease. May I not go one step farther and say that the character, the extent, the duration of her work and the acknowledged position her great success gave her, may have much influence in improving the medical education of the future in Canada by causing it to be made more practical in all our medical colleges, thus fitting the graduates they send out to do the best possible work for their patients in the important duties of their profession.

"Old Trinity Faculty and Graduates" was proposed by G. H. Worthington, of the undergraduates. Mr. Worthington, on behalf of the committee, thanked the graduates, especially those from a distance, for their coming to join in the good-fellowship and making the function such a phenomenal success. He said the class had probably decreased in numbers since the days of Trinity, but not in loyalty and enthusiasm. The faculty of old Trinity Medical College was probably unparalleled as a teaching staff, and, as a result, her graduates went forth thoroughly equipped and most desirable men in their profession.

Drs. Temple, Bingham and Powell responded to this toast. "They Are Jolly Good Fellows" and three cheers greeted Dr. Temple. Dr. Temple very fittingly responded to this toast, outlining the work of the old faculty and their duties, which, while naturally arduous, had been pleasant and, he hoped, profitable to those who had been students at Trinity Medical School. Dr. Temple congratulated the committee on the success of the function and the consequent pleasure it gave him to be present. Upon taking his seat Drs. Temple and Geikie were presented with bouquets of flowers by the committee.

Dr. Jas. Bingham, of New York, was most enthusiastically cheered. He very wittily compared the amalgamation to matrimony. He said he was delighted to attend such a magnificent gathering of his fellows. He had come all the way from New

York to be present, and was being more than repaid by the joy such a gathering brought to him. He was in the presence of fellow-students, many of whom he had not met since the old days at Trinity.

Dr. Powell, in his usual entertaining manner, recalled many of the pleasant days he had spent as a student, and afterwards as a teacher at old Trinity. The reunion, he said, gave him very great pleasure, as no doubt it was the sentiment of each and every graduate.

"The Class of '07" was proposed by Dr. H. B. Anderson. Dr. Anderson congratulated the undergraduates on the success of the function, which was largely due to their efforts. They had laid the foundation for what would doubtless be, and should be, an annual event, and while they were small in number, they had lost none of the old-time enthusiasm of Trinity Medical students.

Mr. Crux, in responding to the toast to "The Undergraduates," said that as undergraduates his fellows felt that an honor was being done them in the graduates joining to make the dinner such a success. Trinity students were as loyal as in former days, to the old school which they would always be proud to honor.

"Hospital and Press" was proposed by Dr. Parsons, and responded to by Dr. Clouse.

At this most opportune juncture Dr. Wishart interrupted the proceedings, and said: "We owe a debt of honor to our old chief, whom we are all pleased to have with us on this occasion. I feel we cannot better show our recognition of his long and faithful service to old Trinity Medical College and medical education than to have his portrait painted and placed in what will be the Academy of Medicine." He moved that this be done, Dr. Clouse seconding the motion and voicing the sentiments expressed by Dr. Wishart the motion was carried by rousing cheers and singing "For He's a Jolly Good Fellow."

Dr. Anderson moved a vote of thanks to the committee for the splendid banquet, emphasizing the good feeling and great pleasure such functions were bound to bring, and included in his motion that the reunion be made an annual event, and to take place at the time of the Ontario Medical Association meeting, the next to be in 1908.

Dr. McMurrich was appointed convener of committee.

All present grasped hands and sang "Should Auld Acquaintanve Be Forgot."

Much credit is due the committee in charge of the function, viz.: Hon. Chairman, Dr. Geikie; Hon. Vice-Chairman, Dr. Temple; Chairman, G. H. Worthington; Secretary, A. Crux; Treasurer, B. S. Cerswell; Dr. Marlow, Dr. Pepler Dr. McMurrich, Dr. Hayden, Dr. T. B. Richardson, Jas. Sproat, W. T. Scheck, and O. A. McNichol.

The menu was elaborated by Dr. Hayden with many interesting and amusing sketches.

HOSPITAL ASSOCIATION.

The Canadian Hospital Association was organized at a well-attended meeting held in the reception-room of the Parliament Buildings, on April 1st. The attendance, mostly of superintendents of hospitals, was gratifying and quite representative. Constitution and by-laws were adopted, a number of interesting addresses were delivered, and the following officers were elected: President, Miss Louisa Brent, Hospital for Sick Children, Toronto; First Vice-President, Dr. C. K. Clarke, Toronto Asylum for the Insane; Second Vice-President, Dr. McIntyre, Kingston General Hospital; Third Vice-President, Mr. W. Kenney, Royal Victoria Hospital, Halifax, for the Maritime Provinces; Fourth Vice-President, Mr. H. E. Webster, Royal Victoria Hospital, Montreal; Fifth Vice-President, Mr. A. L. Cosgrave, Winnipeg General Hospital, for Manitoba and the West; Secretary, Dr. J. N. E. Brown, Toronto General Hospital; Treasurer, Miss J. Patton, Grace Hospital, Toronto.

As a preliminary Dr. McIntyre, Kingston, was elected chairman, and Dr. J. N. E. Brown, Toronto, secretary, of the meeting.

Dr. R. R. Ross, of the Buffalo General Hospital, President of the American Hospital Association, delivered a short address, in which he outlined some of the important work carried on by that organization, and gave some useful suggestions as to the formation of a society here. During the course of his remarks he said that the American Association would probably hold next year's annual convention in Canada.

Dr. Bruce Smith, Provincial Inspector of Hospitals and Charities, read a paper, in which he dealt with some problems of hospital life and work. He emphasized in his preliminary words the growth of hospital work and usefulness in Ontario, pointing out that last year 41,950 patients were treated in the hospitals of this Province, and that the total annual expenditure for maintenance, including capital account, had reached the aggregate of $1,228,289. Dr. Smith urged, among other things, the adoption of a uniform hospital register, up-to-date methods of accounting, true economy as distinguished from parsimony, and increasing efforts to make the hospital an institution with an educational aim, as well as a place for the healing of sick bodies.

The work in asylums for the insane was the subject of a paper read by Dr. Ryan, Superintendent of the Rockwood Hospital for the Insane, at Kingston. Diagnosis, classification of patients, and other like matters were dealt with.

Hon. Messrs. Foy, Hanna and Beck briefly addressed the meeting, expressing the hope that the organization to be formed would meet with success. The Provincial Secretary alluded to the

increase in the provincial grant to the hospitals. This year the aggregate is $130,000, instead of $110,000. The reason for the increase is the new basis of distribution—namely, a flat rate of 20 cents per day for each non-paying patient. Formerly the sum of $110,000 was divided among all the hospitals on the per capita basis, and the increase in the number of institutions and the class of the patients mentioned had reduced the per capita to about 17 cents.

The election of officers and the adoption of the constitution and by-laws followed. In the evening those present from outside points were the guests of the Toronto superintendents at a dinner served in the buildings.

ITEMS OF INTEREST.

Canadian Branch of the Waterbury Chemical Co., of Des Moines, Iowa.—The Waterbury Chemical Co., of Des Moines, Iowa, have opened up in Toronto a Canadian Branch of their house, where they will, from this date, manufacture for this market their Waterbury's Metabolized Cod Liver Oil Compound, with creosote and guaiacol, and Waterbury's Metabolized Cod Liver Oil Compound, plain. The firm are anxious to bring the merits of their preparations under the notice of the Canadian Medical Profession, and will be pleased to send a sample of both, with literature, to any physician sending them a post card expressing their desire to receive the same. Meanwhile, both preparations can be obtained from any retail druggist in Toronto and other large cities, or through the wholesale jobbing houses. Vide announcement on page v. of this issue of the JOURNAL.

The Canadian Medical Exchange.—Physicians in search of a field for practice may not know that they can find out from the Canadian Medical Exchange, conducted by Dr. Hamill, 75 Yonge Street, Toronto, practically every medical practice for sale in the Dominion, as well as many places where there is no doctor and the community needs one. This information is given prospective medical buyers free of any charge whatever, the only condition being that buyers must agree to hold sacredly confidential and for their own use only all information received from the above office. Medical vendors and vendees can secure the goal desired by having their names registered with Dr. Hamill better than by all other methods combined that they might adopt, as practically everything in the market having merit is in his office. It is a great convenience to buyers and sellers to thus have one central depot to supply their needs.

The Physician's Library.

BOOK REVIEWS.

A Compend on Bacteriology, including Animal Parasites. By Robert L. Pitfield, M.D., Pathologist to the Germantown Hospital, Pathologist to the Hospital for Lung Diseases, Chestnut Hill, Pathologist to the Widener Memorial School, late Demonstrator of Bacteriology at the Medico-Chirurgical College, Philadelphia. With four plates and eighty other illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1907. Price, $1.00 net.

This is one of Blakiston's well-known Quiz-Compends. It is well suited for review work by students, or as a convenient reference for the busy practitioner. The more important pathogenic germs are described and illustrated, and a good account is given of their morphology, vital resistance, chemical activities, pathogenesis, modes of growth and staining immunization. Erlich's theory, the opsonic theory, vaccines, toxins and antitoxins are explained. A section is devoted to animal parasites, making it a very complete and useful little work. W. J. W.

On Retro-Peritoneal Hernia, being the "Arris and Gale" Lectures on the "Anatomy and Surgery of the Peritoneal Fossae," delivered at the Royal College of Surgeons of England, in 1897. By B. G. A. Moynihan, M.S., F.R.C.S. Second edition, revised and in part rewritten by the author and J. F. Dobson, M.S., F.R.C.S. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1906.

This is a book of 195 pages and contains valuable information on the forms of herniae which develop from time to time in the various folds and fossae which are found in different parts of the peritoneum. The first chapter deals with the development of the intestinal canal and peritoneum. This is given in sufficient detail to make the relations of the peritoneum to the viscera, as one finds them in the adult, intelligible. The second chapter describes the duodenal folds and fossae. The third chapter is upon the peritoneal folds and pouches in the neighborhood of the caecum and vermiform appendix. The fourth chapter on the intersigmoid fossa and, lastly, the fifth chapter on the herniae into the lesser peritoneal sac completes the work.

The essay contains references to all the important cases which have been recorded in the literature of herniae of the type under consideration. Numerous historical references are of interest also and the value of the work is further enhanced by the details of appropriate methods of treatment to be adopted in individual cases.

We are undoubtedly indebted to Mr. Moynihan for presenting in such concise form a valuable and useful monograph on an important subject.

The Practice of Obstetrics. Designed for the Use of Students and Practitioners of Medicine. By J. Clifton Edgar, Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College; Visiting Obstetrician to the Emergency Hospital of Bellevue Hospital, New York City; Surgeon to the Manhattan Maternity and Dispensary; Consulting Obstetrician to the New York Maternity Hospital. Third edition, revised, with 1,279 illustrations, including 5 colored plates and 38 figures printed in colors. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1906. Canadian agents: Chandler, Ingram & Bell, Ltd., Toronto.

It is but two years since the last edition of Dr. Edgar's work appeared, and now it comes out revised almost from cover to cover. Up to date, the sale of his book includes no less than 11,000 copies in less than three years.

We find that one of the criticisms made when the first edition first came to light, viz., that the book was a trifle bulky, has been met by the author in cutting down this edition by fully 100 pages, notwithstanding the fact that a large number of new illustrations have been added. The following subjects, which did not appear in the second edition, are taken up at some length in this: Appendicitis complicating pregnancy; tapeworm complicating pregnancy; fibroma molluscum gravidarum; hematoma of the vulva; lactation atrophy of the uterus and breasts; brachial birth paralysis; vaginal incision and drainage and new history charts for institution work.

The author has paid a great deal of attention in bringing the embryology and pathology of the subject up to date.

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Original Contributions.

THE DETECTION OF MENTAL DEFECT IN SCHOOL CHIDREN.

BY C. K. CLARKE, M.D., LL.D.

Last June I took part in a Symposium on the Prognosis and Treatment of Dementia Precox at the meeting of the American Medico-Psychological Association, which was held at Boston. During this discussion I made the following remarks:

"Little is to be said about treatment, unless it may be suggested that a careful study of school children should regularly be made by those who are familiar with the disease and understand the gravity of the situation. Surely if ever the advisability of early treatment of disease is indicated, it is in dementia precox. Consultation with intelligent teachers would generally bring to surface those weaklings whose future is threatened by the development of dementia. Treatment might then be possible, and in many instances psychotherapeutics and other treatment of value suggested. It is not going beyond the truth to say that most of our public school systems are the very worst possible for the care and development of the D. P. classes. It would be better for the State, the weaklings and all concerned, if these children could be recognized early, and intelligent effort made to steer them clear of the dreadful fate that ordinarily stares them in the face. Possibly, in spite of any means taken, a large proportion of these classes would run to the terminal stages, but certainly the effort to avert this result should be made intelligently and persistently."

These remarks must be the text from which I shall speak very briefly to-day.

When an alienist has been in harness for a few years he learns,

among other things, that the admissions to hospitals for insane contain a large proportion of young people, who have already reached the incurable stages of disease. Ordinarily, they will go from bad to worse, sinking into a condition of mental torpor that ranks them as ciphers, as far as the world is concerned. Under careful treatment a small percentage improve, and lead lives of limited usefulness, as long as preserved from over-strain, and a few are said to recover. I make the remark "said to recover" because my own experience has led me to believe that complete recovery is so rare that it can scarcely be said to occur. Now, what is dementia precox—in other words, precocious dementia? If we limit its definition carefully, we find that it is a form of mental disease appearing generally at the first developmental crisis, rapidly running a course culminating in dementia, as characterized by apathy, indifference, negativism, irrelevance and inability to make continued mental effort. These wrecks are the most striking evidences and proofs of what a bad heredity will do for those who are cursed with it, and who try to endure the strain imposed upon the organism by civilization. If it were the truth that as nature weeded out the weaklings, gradually, dementia precox was disappearing, there would be little reason for calling attention to the present state of affairs. Unfortunately, civilization and culture are not always under the control of the best of nature's laws, and certain conditions of society are decidedly artificial. We do not yet understand the best methods of brain development, nor have we learned to recognize all of the danger signals of over-strain.

The methods of making mental and physical analyses employed by the modern alienist are so exact, so painstaking, so plodding and so different from the delightful, "jump-at-conclusion" ways of many of his predecessors that it will not be long before he will be in a position to offer suggestions of immense value to the whole world. Perhaps we have too little patience with the so-called theoretical psychology, much of which is attractive, but not founded on fact; but, at all events, the day is not far distant when the theoretical psychologist will be forced to correlate his theories with the facts of psychiatry before he dare offer his wares to the admiring public. Experiences in abnormal psychology make plain the truths of the normal, and allow us to fix the standard, not for a class, but for the *individual*, something that the theorist nearly always overlooks.

It is here public school systems fail so frequently; they are constructed, as no doubt they must be, to a very great extent with regard to classes rather than individuals. Now to idealize on what public schools might be is seductive; but I am here merely to discuss, from my standpoint, a practical problem that must some time or another be faced.

In making an analysis of a mental case, we commence with the history from the time of birth, and, if possible, go back as many generations as authentic history will give us an account of. The whole development of the child is scanned as closely as it can be done, and rarely indeed in cases of dementia præcox is the history without a hundred significant warnings of the tragedy to come—warnings so clear to those familiar with the ear marks of this protean disease that no competent observer could have overlooked them.

When I turn to my own school days and read the histories of the pupils, I stand aghast at the tragedies which occurred, and which possibly might have been averted had the teachers recognized the drifting of several frail barks to their inevitable doom beneath the Niagara of dementia.

These children did their best to stem the current, but no helping hand was stretched to save them from their doom, and their fate was never in doubt for one moment. The wrecks are now scattered about in various institutions for the insane.

The position occupied by such children in the school was somewhat striking—none were *average* in any sense of the word, but at once attracted attention by their departures from what might be called the normal. In some, mannerisms were clearly becoming apparent, the ego undergoing hypertrophy, and emotional disturbances making themselves manifest. Apathy and indifference were the characteristics in others, and those of the paranoid variety were introspective to a degree that brought upon them the accusation of stupidity. In every instance the true mental status was not suspected by the teacher, although some of the other pupils had formed shrewd guesses regarding the mental defect of their companions.

Let me detail very briefly one or two striking examples:

J. C. was a boy of bad heredity, and at an early age showed striking abnormalities in the way of sexual perversions. At school he did well until about thirteen or fourteen; indeed, in certain directions showed unusual ability, especially in mathematics. Then a gradual change took place: he became quiet; neglected work, and was the butt of the school. Teachers lost patience with him, but he showed absolute indifference to the many punishments which came in his direction. He startled the class now and again by flashes of brilliancy which were quite unlooked-for, but at once relapsed into indifference again. The jeers of his companions were taken in good part and without resentment, and among the pupils he acquired the reputation of being a good-natured fool.

He succeeded in mustering up enough energy to make a poor pass at a matriculation exam., and became the *bete noir* of a professor, who was exasperated beyond measure at the stupidity of his pupil, and yet from time to time the whole class was electrified

by spasmodic exhibitions of an ability that might, if gone on with, have left all of the other pupils in the rear. The case came before my attention, and from what I learned, without seeing the lad, the development of dementia paranoides was suspected.

A few weeks after this time the boy made what was supposed to be a most determined effort to commit suicide, and I was called upon to give an opinion on the mental status. The patient spoke to me freely and without hesitation, and the story told was a pathetic one. He had been fully alive to the false estimates made by his teachers, but had been so interested in watching, as he believed, the development of a new brain, that he had no time to worry over the trivialities of school life. "They called me stupid," he said, "but if I had cared to exert myself I could have passed them all."

A mysterious voice had been directing him, and he had been told by it that he had the same power as Christ, and his belief in that power had led to his making the so-called attempt at suicide. He reached complete dementia in a few months, and died in a year or so.

Here is a brief history of a case of the hebephrenic variety:

C. S. was always an eccentric child; even in the earliest days at school she attracted attention by her mannerisms and vanity. When she was ten or twelve her mannerisms were a common subject of remark. She walked with a silly strut; her hair was arranged in a manner so grotesque that it was always a subject of comment, particularly on the part of the village gossips, who saw evidences of the degeneracy of the modern days in this so-called new style. Even her voice, as is so often the case in D. P., gave evidence of the abnormal. This poor girl endeavored to stand the pace set at school, but in vain. By and bye the village gossips had more than enough material to keep their tongues wagging. Poor C. S. began to give evidences of what they called "dreadful wickedness"—what I was able to classify as well-defined mental defect.

She was removed to a hospital for the insane, and reached complete dementia almost at once. To see her now, after many years, a mere lump of hideous clay, is object lesson enough to inspire many a plea, far more eloquent than this, in favor of more careful study of school children, in search of the weaklings who may be helped.

Perhaps I should have said that I am not one of those who believe that our school systems are so developed that they cause over-strain in the average child. On the contrary, my impression is that the majority of children are capable of acquiring with ease and benefit, much more than is given them, and I strongly believe in the proper development of the brain, an organ that is of far greater importance than any other in the human economy. I merely maintain, that without an intelligent study of the individual, it is not possible to avoid the tragedies the alienist is called

on every day to witness. With all respect to those who have evolved our educational systems, enough attention has not been paid to the training of teachers, who should be given broader ideas, and more thorough knowledge of the requirements of actual life, and have some conception of the dangers of over-strain in abnormal and diseased children. The education of the masses is, of course, a laudable ambition on the part of any nation, but no greater error can be made than to attempt to make finished scholars of poor weaklings whose sole chance of a useful life lies in carefully guarding them from every species of mental strain.

Paton says: "The first duty of the educator should be to determine the latent capacity of the individual, and then adopt the training, as far as possible to meet the needs of the developing nervous system. To render it possible for an individual who is physically and mentally unfitted for the stress associated with the effort to undertake the acquirement of what is termed a liberal education, should be regarded as an offence against the public health and morality, no less culpable than if one were to place lives in an environment where they are exposed to an infectious disease."

Efforts to control the spread of exanthematous diseases are regarded as a necessity by all but a few faddists, and so sound is the common sense of the community in the control of such matters that we have become almost socialistic in some lines.

How different, though, when questions of sound mental health come up, and yet six or seven thousand chronic insane in the hospitals in Ontario testify to the fact that there is something wrong in our methods. Remember that fifteen per cent., some say twice that proportion, are cases of dementia precox, and the significance of my contention may be grasped. Consider that the first evidence of the coming mental breakdown were to be seen during the school days of these children, and the importance of the whole subject must at once strike you.

Now in my many years of experience it has been my lot to see a large number of children who were abnormal and diseased, and I have been surprised how litle intellingent notice has been taken by teachers of their developing defects. In the majority of instances they have been regarded as nuisances; blamed and punished for their stupidity and apathy, and in every way possible made to suffer for so-called sins, for which they were in no way responsible. Often the whole class is made to mark time for one or two weaklings who should be weeded out. This has been an aggravation to teachers whose reputation depends far too frequently on the number of pupils who "pass", rather than on the solidity of the work taught.

I have no fault to find with the average teacher: as a rule he is far more sinned against than sinning. My contention is merely

for a more careful study of the individual pupil in the interest of the State and of everybody concerned.

How is this to be accomplished? At present I believe teachers are supposed to acquire some knowledge of normal psychology—delightful theory, but too often theory founded on arm chair speculation that would work out splendidly if we had to deal with standardized human beings. Those of us who study abnormal psychology soon realize that in our investigations the *individual* is the basis of study, and methods of treatment must be directed from that point of view. Now, no one expects teachers to have a knowledge of psychiatry or of psycho-therapeutics, and no one can expect them to decide off-hand on the proper course to be followed in the treatment of abnormal and diseased children, but I think it important that they should know something of the facts I have detailed to-day, and to report any suspicions they may have regarding the development of such conditions in any of the pupils. It is difficult to say just how the State must deal with the problem, which is even more difficult to handle than that of vaccination, because of the want of special knowledge, both on the part of the public and the physican in general practice. This physican has little or no opportunity to see much of mental defect and disease, and is apt to overlook even some of the most striking appearances. However, the problem must be met in due course, and its importance has already been recognized in some of the Continental cities. What, I suppose, will eventually be done is to have teachers co-operate with physicians who are familiar with mental disease in all of its stages, and the proper course mapped out for the individual who is not equal to the strain of public school work.

In one direction this will, perhaps, entail immense cost to the State; in another a marked saving.

A NEW METHOD OF DEALING WITH CLEFT PALATE.*

BY F. N. G. STARR, M.B., (TOR.),

Associate Professor of Clinical Surgery, University of Toronto; Associate-Surgeon, Hospital for Sick Children; Assistant-Surgeon, Toronto General Hospital.

Mr. President and Gentlemen—

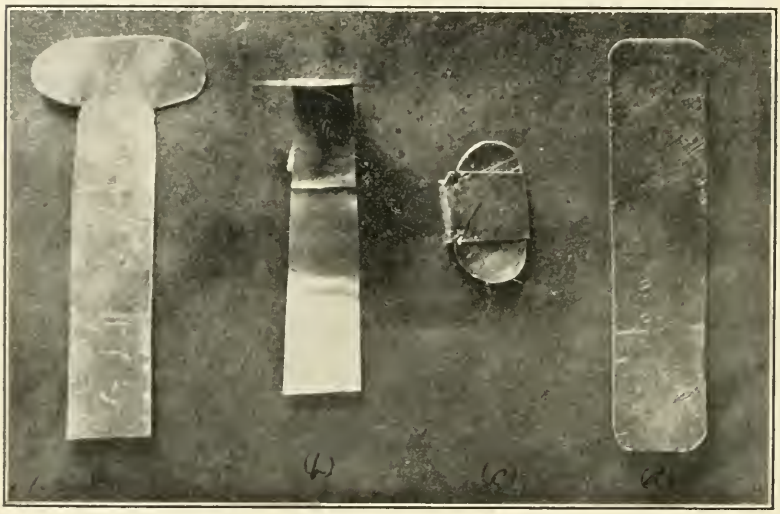
Those of us who have had much experience with cases of cleft palate have all met with more or less disappointment in our results. It has more than likely happened in the practice of all who have undertaken these cases that certain ones, though they looked promising at the time of operation, have broken down at some point in the line of closure, if not throughout. This experience has been mine upon more than one occasion. In looking about for causes, the following points presented themselves: (1) Tension along the line of suture. (2) Sucking of the stitches by the patient. (3) Infection from the mouth.

When searching for some means to overcome these difficulties I read a paper by Chas. H. Peck, of New York, in the Annals of Surgery for January, 1906, in which he made reference to a plan suggested by C. H. Mayo, namely, the introduction of a tape through the lateral incisions completely surrounding the flaps, and thus preventing tension. I tried this at the first opportunity, but though it took off the tension I am satisfied that in the three cases upon which it was used the risk of infection was increased, for after forty-eight hours it became most offensive, and by the end of a week the patients almost hated themselves. It therefore became necessary to find something better, and finally as a substitute for the tape I chose aluminum, sufficiently beaten out to make it pliable. I have no doubt that silver would answer the purpose equally well, but it is more expensive.

My technique varies somewhat from the Langenback operation, and I think saves time, which is an important point. The child is placed upon a table with a sandbag under the shoulders to throw the head well back, while the surgeon stands to the left of the patient. Hewitt's gag is placed in position, and the tongue drawn well forward by means of a silk suture. I make the first lateral incision well out to the alveolar margin of the hard palate, carrying it beyond the anterior extremity of the cleft, if the cleft does not extend through the alveolar margin. With the periosteal elevator the muco-periosteum is quickly denuded from this side, then with Lane's curved scissors the palate aponeurosis is snipped from the posterior margin of the hard palate, thus freeing the flap from its bony attachment. The flap should be freed anterior to

*Read at meeting of the Toronto Medical Society, May 2, 1907.

the cleft. This incision may then be packed with a piece of sea sponge, while one proceeds to the opposite side to deal with it in the same way. The first packing may now be removed, when one finds that all hemorrhage has ceased. The edges of the flap are then removed with a small tenotomy or cataract knife, making certain to cut as thin a slice as possible, at the same time taking the whole thickness of the flap margin. By the time denudation has been carried to the anterior angle on one side the sponge packing from the other may be removed, and denudation proceeded with on the other flap. While the raw edges are still oozing, and before there is time for mucous to glaze them over, I begin



(*a*) (*b*) (*c*) (*d*)

FIG. 1.

(*a*) Aluminum prepared with flange to cover line of suture.
(*b*) Same, bent at an angle preparatory to passing small end through lateral incision.
(*c*) Appearance of splint when fastened in place.
(*d*) Piece of aluminum without flange, that may be used in small clefts.

suturing, commencing at the anterior angle and proceeding backward. Horsehair is used, and each suture is passed about one-eighth of an inch from the margin, and from one-eighth to one-quarter of an inch apart. These are left long until all have been passed, when they may be quickly tied. Lane's needles and needle-holder are used and greatly facilitate the work. I then take a piece of aluminum (Fig. 1.), bend it at an angle where I want it to fold over the outer side of the flap, and pass it through one lateral incision; then by passing a pair of forceps into the opposite lateral incision I grasp the free end and pull it down into the mouth cavity again, carry it across to the point at which it entered, and there cut off any excess. With a heavy needle one

may then easily penetrate the metal, at one or two points as required, and pass a horsehair suture through and tie it to prevent the free end scraping and irritating the tongue, or the free end may be turned up into the lateral incision again, and pinched with a pair of forceps (Fig. 2.) The operation takes from twenty-five to fifty minutes. The aluminum may be left in for eight or nine days, when it is removed by cutting it across close to the lateral incision, and the stitches are taken out. The lateral incisions then rapidly heal, and the patient may leave the hospital in from ten days to two weeks. The case, aged two years and four months, that I show to-night, was operated upon April 19th last. The cleft was of the soft palate, and about one-third of the hard. The aluminum splint and the stitches were removed on the 28th; you, therefore, see the case thirteen days after operation, and may judge for yourselves as to the efficiency of the method. This is

FIG. II.

To illustrate aluminum splint in place—covering line of suture and preventing tension.

FIG. III.

Pin through small opening.

the third case upon which the aluminum splint has been employed. The first one was in a child, aged 14, that had a very wide cleft which had been pronounced incurable, and it was advised that she wear an obturator. The cast of the mouth (see Fig. 3), was sent me a few days ago by Dr. Bennett, a dentist of St. Thomas. You will observe that union has taken place except at one pin point spot at about the junction of the hard and soft palate. This, of course, can readily be repaired.

The second case was a child of two years with a complete cleft in which union occurred throughout.

The advantages of the aluminum splint that occur to me are these: That it prevents tension, and prevents—till union of the edges has occurred—adhesion taking place between the muco-peri-

osteum and the bone of the hard palate. I am satisfied that some cases have gone bad because of this, in that while there may be no tension at the completion of operation, yet, when such union begins, tension upon the edges of the flap may be sufficient to separate them by tearing out the stitches. Then, too, it prevents the child sucking the stitches. To avoid infection the mouth is sprayed with a solution of boric acid and 10 per cent. rectified spirits, which may easily find its way under the splint, and remain in contact with the wound for some time. For this purpose, however, I shall in future have the opsonic index taken, and if it be low to the germs within the mouth an injection of vaccine will be administered a day or two before the operation, when there will be little or no possibility of infection. Thus, one has overcome all the causes that tend to prevent union.

112 College Street, Toronto.

Selections, Abstracts, Etc.

HOW CAN PROPHYLAXIS BY TREATMENT IN THE CASE OF THE VENEREAL DISEASES BEST BE OBTAINED?*

BY JAMES PEDERSEN, M.D., NEW YORK.

Whatever the measure of proyhylaxis to be expected from treatment, it stands to reason that the more thorough the treatment the better the prophylaxis. The solution of the question which forms my part of the evening's subject must, therefore, be worked out along two parallel lines, namely: How to obtain thorough treatment in the private office; and how to obtain thorough treatment in the public clinic. The latter is the point of chief concern. To focus the discussion upon this point and to hope that the discussion may be productive, it will be necessary to assume that every man and every woman, whether professional or lay, who has undertaken or who will undertake to influence the health and happiness of human beings, the physician, the philanthropist, the settlement workers, yes, and the faddist, whether he is ostensibly practising medicine or not, it will be necessary to assume that one and all accept as axioms: (1) That the venereal diseases are tangible entities; (2) that they constitute a formidable menace to the individual and the State; (3) that there is a crying need for prophylaxis; (4) that actual treatment, persistent and persevering, is a potent agent in prophylaxis; (5) that maaterial medication, given or applied, plus obedience to the laws of general hygiene, constitute the only actual treatment; (6) that to impart instruction as to the serious nature of the venereal diseases is a social duty which all are under moral, legal, and ethical obligation to fulfill.

Assuming, then, that these axioms have been accepted universally, the question how best to obtain prophylaxis by treatment in the case of private office patients will never cause a moment's concern, and will therefore be eliminated from this discussion; while the same question as to public clinic patients will have been reduced to an enquiry into (A) dispensary facilities and (B) hospital facilities, necessary to thorough treatment and prophylaxis. To give all the weight possible to my paper, permit me to say that

* Read before a meeting of the American Society of Sanitary and Moral Prophylaxis, February 14, 1907.

I have based it largely on the writings of Fournier, who, in a long experience, has given this subject much careful study and thought. I have aimed, however, to adapt his suggestions to American sentiments, and have ventured to incorporate my personal observations.

(A) *Dispensary Facilities.* To advance the success of prophylaxis by treatment, we need more dispensaries and better facilities in those already established, all with provisions for carrying out the restrictions against dispensary abuse. Another paper, this evening, has dealt with that specific point, therefore no further comment is desired here. I may be permitted to say, however, that at present, in my experience, combating the evil rests chiefly with the physician in the dispensary. He feels called upon in many cases to challenge the would-be patient, thus taking from the already limited time allotted to treatment and teaching.

To everyone thoughtfully interested, whether from a medical, a philanthropic, or a sociological point of view, it must be obvious that more dispensaries are needed, each located accessibly in a district not already provided for. These should be general dispensaries under private or public control. Special dispensaries, *i.e.*, for venereal diseases, would defeat their own object by the unavoidable offensive publicity they would soon attract.

For convenience, the facilities needed in each dispensary may be taken up categorically under separate heads.

The Hour of the Clinic.—There should be an afternoon clinic and an evening clinic, both for men and for women, at least three times weekly (the men and women on alternate days), but six times weekly when the attendance demands it. An early afternoon clinic would accommodate the unemployed, would not interfere with their morning search for work, and would ease the strain on the evening clinic. The evening clinic should begin preferably at 7, admit patients for one hour, but remain in operation until 10 o'clock, if necessary, the clinical staff doing duty in two divisions to avoid obliging any member to remain longer than an hour and a half. (It is understood that any patient under fifteen years of age should be referred to the medical clinic for children, where, if necessary, he or she could be seen in repeated consultation by a member of the staff in venereal diseases, whose duty it should be to instruct the guardian in the details of prophylaxis.)

The Waiting-room.—There should be a special waiting-room attached to the suite of rooms devoted to the venereal clinic, and the patients should be allowed to pass to it without detention in the general waiting-room.

The Consultation-room.—This should either be large enough to so accommodate an increasing staff of clinical assistants that each may be consulted at least semi-privately by the patient before

him, or there should be a series of small consultation-rooms. Of the value of privacy in the clinic consulting-room Fournier makes a strong point. It encourages the timid and diffident to seek advice, it lends to the dignity of the clinic, and it fosters careful treatment.

The Staff.—The staff should consist of a chief and as many clinical assistants as may be necessary in his judgment to complete the work of the clinic in an orderly and professional manner within the time limit. The clinical assistants should hold an official appointment from the institute of which the dispensary is a part or a branch, and their attendance should be made a matter of record and report. By way of return for their services, applicants for treatment at the clinic and able to pay should be referred to the private office of each clinical assistant in rotation, without favor, by the proper officer at the application desk. At least half the number of clinical assistants in the clinic for women should be women physicians, holding official appointments with the same responsibilities and privileges as the men physicians.

The routine work of duty in a clinic often becomes a drudgery to the recent graduate, especially when performed in the evening after a day's work at building up a private practice upon which he must depend for support. But if this or some similar system were not only introduced, but also carried out, by which the clinical assistant could feel that he was a factor in the personnel of the dispensary and of its parent institute; that his work had a value and a dignity in the opinion of the governing body, and that his growing experience received recognition in the form of patients referred to him for treatment at his office, then would his clinical duty be less a drudgery and more a pride, thus adding to the prestige of the institute that appointed him. A dispensary run on these lines, especially if equipped for giving careful, detailed, scientific treatment expeditiously, would attract desirable men who would learn as well as treat and teach. Thus would be created a growing number of young practitioners with knowledge and skill in the treatment of the venereal diseases, and the office of each would become a subcentre for prophylaxis by treatment. Many a clinical patient challenged as to his right to attend, declares that the "private doctor" he went to did not know how to treat him. Granting that the patient expected too much of the physician, was there not an avoidable error on the part of that physician in having failed to instruct his patient as to the nature and prognosis of the disease? The vicious circle is obvious.

Orderlies.—They should be paid sufficient to attach them to the clinic and to inspire their personal interest. They should have the care of, and be responsible for the instruments, supplies, and equipment. Not more than ten hours a day should be expected of them. During the morning they could do duty in the medical

wards; between the afternoon and evening clinics they should be allowed an interval for recreation to fit them for the evening's work. A system of substitutes should be arranged to secure for them at least one night off a week when the clinic is held every night. An annual vacation should be similarly arranged. Possibly no one who has not had practical experience can appreciate the time saving value of an intelligent orderly who has remained not only to be trained, but also to practise the training. Furthermore, he has an undoubted influence in attracting patients through his able assistance in expediting the work of the clinic. It may not be too Utopian to add that eventually, by arrangement with the Mills Training School, its pupils could serve a specified time in the different clinics in rotation as a part of their training in venereal and genito-urinary diseases and their prophylaxis.

Nurses.—The present system of having undergraduate nurses in attendance at the gynæcological clinics needs no elaboration. There will remain only the detail of extending it to the venereal clinic proper, in both the attached and detached dispensaries controlled by the hospital of training.

Equipment, Instruments and Supplies.—These should be furnished and maintained by the hospital or institute of which the dispensary is a part or a branch, and should imitate those of a private office devoted to venereal diseases and genito-urinary surgery. The orderly in the men's clinic, the senior nurse in the women's clinic, should have the care of these, and be responsible for them. A well-appointed, well sustained clinic is obviously a greater power in prophylaxis by treatment than its opposite. An important detail of the equipment should be printed slips, stating the nature and danger of the venereal diseases, the rules to be observed during treatment, and the rules for prophylaxis. Such a slip, covering the three diseases, should be given to every patient.

(B) *Hospitals.*—The question of hospital isolation of venereal patients need not come up for discussion. The fact that any such plan would defeat its chief purpose, and the fact that hospital treatment is needed only in exceptional cases, should be a sufficient veto. We need concern ourselves only with the exceptional cases. Though few, they are already in excess of the available hospital accommodations. As far as I know, all the general hospitals, excepting those under the control of the city, refuse patients in the active stages of venereal disease. Among the private hospitals, those that admit such patients admit them under protest or only when an operative emergency is present or threatens.

The attention of boards of governors and other bodies in control of hospitals should be called to this deficiency and that, from the humanitarian point of view, there is need for relief, not only for the sake of the infected patient, but also for the sake of the immediate community and the State. The different bodies in

control of general hospitals should be appealed to most urgently; it is in their power to lend very substantial aid in the prophylaxis of venereal diseases.

In the *public* hospitals, one ward for men and one for women should be set apart somewhat removed from the general wards. The orderlies and the nurses, respectively, in these wards should be responsible to a member of the house staff, he, in return, to a specially appointed board. The venereal wards would not be regarded with curiosity after the first few weeks; they would soon be accepted as an integral part of the hospital, as at Bellevue Hospital to-day.

If the criticism be made that this would multiply the duties of the house staff and increase the detail of the hospital management, let it be noted that the house staff has been increased in some hospitals, and that it should be increased in all. Every house staff to-day has more work than is good, either for it or for the service. A periodic increase in every house staff to meet the ever-growing demands would be no more than consistent with the modern idea of progress.

In a *private* hospital a man patient could be practically isolated with a graduate from the Mills Training School, who would carry out all the detail necessary to safeguard the neighboring patients. This has been done in my own practice with satisfactory results and without unduly disturbing the accustomed discipline and routine of the private hospital. Still easier would this be in the case of a woman patient, whose special nurse would be detailed from the hospital's corps of women nurses.

The criticism that these suggestions as applied to dispensaries and public hospitals entail great expense may be anticipated. It is realized that to carry out any suggestion would require time, but while contemplating the greater, why not put into operation the lesser? Let the facilities in the dispensaries and hospitals already established be increased and improved at once. Let the expense be met by an annual legislative appropriation, forced, if necessary, by an aroused public sentiment. If the physicians here and abroad have found it necessary to warn the people against the ravaging danger of venereal disease, it is not too much to ask the people to aid in protecting themselves by providing themselves with immediately available defences in the form of more and improved centres of treatment and teaching, the potent aids in prophylaxis.—*N. Y. Med. Journal.*

20 East Forty-sixth Street

THE NEW YORK WOMAN'S HOSPITAL.

This hospital was reopened on December 5, 1906, in its new building on West 110th Street, facing the grounds of the Cathedral of St. John the Divine. Addresses were made by John E. Parsons, the president of the board of managers; Dr. D. B. St. John Roosa, Bishop Henry C. Potter and Gen. Horace Porter. Mr. Parsons gave a sketch of the history of the hospital, which was started in May, 1855, by Dr. J. Marion Sims in a private house on Madison Avenue, and, as a result of the indefatigable labors of Dr. Sims, was enabled some years later to put up the large buildings on Park Avenue on an entire block owned by it, which were occupied until the sale of the property to the New York Central Railroad Company necessitated their abandonment. He stated that notwithstanding the many generous gifts it had received, the new hospital started with a debt of $200,000, and he expressed the hope that, in view of the great benefit which the institution had proved to the community, the city authorities might be induced to aid its finances.

Dr. Roosa paid an eloquent tribute to the original genius of Marion Sims, stating that his device of the silver wire suture was an achievement which was unquestionably to be classed as an epoch-making one. He then referred to the splendid results which were afterwards accomplished by Thomas Addis Emmet, T. Gaillard Thomas and Edmund R. Peaslee; which, with the brilliant successes of Sims, gave the New York Woman's Hospital a unique position and made its work the standard of excellence in gynecological procedures throughout the civilized world. Dr. Roosa also seconded heartily the suggestion of Mr. Parsons in regard to municipal aid and said that, to his mind, it was clearly the duty of the city and state to contribute to the support of this and similar philanthropic institutions. Bishop Potter said that fifteen years ago, when the site for the cathedral had just been selected, he dreamed that these beautiful and historic heights, rendered sacred by the blood of American patriots shed in the war of Independence, would one day be crowned with religious, philanthropic and educational institutions. To-day, much sooner than he could have thought of anticipating, that dream was realized, and there were now located here the rising cathedral, the National Academy of Design, Columbia University, the Teachers and Barnard Colleges, St. Luke's Hospital, St. Luke's Home, and, finally, the new Woman's Hospital.

The new building is constructed of granite and limestone, and so completely fire-proof that it is stated that it would be impossible for the flames of burning material in any one room

to communicate with inflammable material in another. No effort has been spared to render all the appointments of the operating rooms and the wards as complete as possible and thoroughly in accord with the most approved ideas of modern hospital construction. The capacity of the wards is one hundred and twenty-five beds and there are, in addition, a large number of private rooms, each of which has its own bath-room. The kitchen, a model of its kind, is next to the roof and is perfectly ventilated. There is a fine solarium, and one of the most attractive features of the building is a roof garden, inclosed in glass at this season, which is bright with palms, vines and pots of blooming flowers. The house staff will consist of six physicians, assisted by a corps of thirty nurses. The hospital as it stands represents an expenditure of more than $1,000,000, and the actual cost of the building, which faces both on 109th and 110th Streets, was $800,000.—*Medical Review of Reviews.*

ABSCESS: DRUG THERAPY.

BY W. C. ABBOTT, M.D., CHICAGO, ILL.

No pyogenetic microbe can live in the body saturated with sulphides till their odor is perceptible on the perspiration or breath.

Give calx sulphurata gr. ⅙ every half hour or quarter hour till saturation; then enough to sustain this effect. Must be true to quality.

It seems better to give the small and frequent doses of calx sulphurata (calcium sulphide) than large infrequent ones; either way will do.

In gonorrheal infections the sulphide of arsenic seems to possess a control superior to that of calx sulphurata; try it further.

All abscesses do better if the blood-supply for repair is pure and nutritious; free from a surplus of toxins. Therefore eliminate!

Keep the bowels free and disinfected with calomel—a grain in the evening, a saline laxative next morning, and calcium sulphocarbolate as needed.

Fatty degeneration of morbid products is promoted by arsenic; give it in some form as may be best, to full toleration.

Nuclein reinforces the leucocytes and makes tonics "take hold"; give it up to a dram each day, best dropped on the tongue.

Quinine restrains sepsis and fever, and is one of the most appropriate tonics to be taken during suppuration.

Aconitine, gr. 1-134, with digitanin, gr. 1-67, form a useful combination for fever, restraining it in harmless limits; a dose every one or two hours.

Arsenic iodide is a powerful stimulant to remove debris; give gr. 1-67, not more than four times a day to an adult.

Atropine checks the discharge from an abscess as it does any mucous secretion; give enough to dry the mouth slightly.

Calcium salts check discharge and rebuild disintegrating cells; give small frequent doses; gr. ⅙ every half hour, lactophosphate best.

Calx iodata fulfils the two great indications—it stimulates absorption of debris and favors rebuilding; give four grains a day.

Baptisin is believed to directly improve the vitality of tissues threatened with death; give gr. 1-112 every hour or two.

Echinacea is gaining testimony daily as to its possession of the virtues of a systemic antiseptic; give a granule every half hour or hour.

Not only septic infections, but suppurations are checked quickly by echinacea, which has no perceptible action in health.

Relaxation of tissues may demand the use of berberine, gr. 1 to 5 each day, or oozing of blood call for hydrastine, a grain a day, divided.

Iron arsenate is the best chalybeate here; give gr. 1-67 every hour, or 1-6 an hour before each meal and at bedtime.

Iron iodide for glandular suppurations; give gr. 1-12 every hour to an adult, better than larger less frequent doses.

Iron phosphate will answer when the arsenate is not needed; give gr. 1-6 every half hour, always in solution if possible.

Lobelin will hasten the maturation of sluggish indurations that are disinclined to soften; a grain a day, divided.

In all cases reinforce the leucocytes by giving nuclein solution, standard, a dram a day, dropped on the tongue.

Neurolecithin is a remarkable reconstructive, not simply for nerve degeneration alone; a tablet four times a day.

A few granules of quassin given in water before meals stimulate the appetite and digestion in a way to aid reconstruction markedly.

Quinine arsenate is the best salt during most stages, the hypophosphite after the discharge has gone the desirable limit.

Quinine hydroferrocyanide is a capital remedy, and may be given up to two grains a day, divided into 1-6 gr. doses.

Sanguinarine stimulates or incites the vitality of the pharyngeal tissues and may do so to others; the idea has never been tested.

Strychnine is frequently needed; the arsenate, hypophosphite or nitrate; best in small doses quickly repeated to desirable tonicity.

There is something about populin that we can not quite grasp; it is no ordinary tonic, and we believe worth close clinical study.

The incitation of the vitality of various tissues to make them more resistant of noxious influences is an unknown book of therapy.

The action of the sulphides is beyond question, when a pure salt is given in sufficient doses and sustained at saturation.

The sulphides, nuclein and echinacea threaten to remove abscess from the list of surgical diseases.

There will never be such perfect drugging that we can neglect to evacuate abscesses, and disinfect them; especially the first focus of trouble.

WRIGHT'S WORK ON OPSONINS AND VACCINE THERAPY.

If the work of Wright fulfils the many expectations entertained by him and others, and if the numerous investigators repeating and elaborating Wright's experiments can continue to confirm his results, a powerful curative agency will be at the disposal of both physician and surgeon. This agency is not strictly a new one, but, granting that Wright's premises are correct, it brings a hitherto incalculable factor under direct observation and partial control.

There exists in the blood of every individual, to a greater or lesser degree, an element (Wright calls it "*opsonin,*" to cook or prepare for consumption) which enters into combination with the bacteria and prepares them for phagocytosis. In order to gauge the power of this element, Wright has devised an ingenious method which enables one readily to compare the opsonic power of the patient with that of normal individuals; the resulting proportion is the "*opsonic index.*" In disease the opsonic index is either higher or lower than the normal, usually higher if the resistance is good, lower if the body reaction is poor. If low, it is often possible to assist the body resistance by appropriate vaccine therapy.

The method of determining the opsonic index, in broad outline, is as follows: An emulsion (or "cream") of the leucocytes of a healthy individual is freshly obtained; likewise the mixed blood sera of several healthy people (called "pool"). Another requisite is an emulsion, of known concentration, of the variety of bacteria for which the patient's opsonic power is to be determined. Finally some of the patient's serum must be taken. Formidable as this list of requisites may appear, by following Wright's technic, the necessary paraphernalia (chiefly pipettes and capsules made of ordinary glass tubing) are readily prepared by each investigator. Like quantities of the patient's serum and the mixed serum of healthy individuals are now taken and each serum is mixed with the same amount of bacterial emulsion and

of normal leucocytes. These two resulting mixtures are incubated at 37 deg. C. for fifteen minutes, in order to allow the phagocytes to do their work, and then blood spreads on two slides are prepared and stained. Fifty or one hundred polynuclear leucocytes are counted; the number of bacteria contained within each leucocyte is determined, and an average obtained. The proportion of bacteria to the leucocyte in the patient's serum compared to that in the normal serum is the *opsonic index*. A surprising number of technical details and simple expedients has been devised by Wright in order to simplify and render accurate these manipulations.

Should the patient's index prove low, it will show that his resistance to the particular bacterial invasion is insufficient to successfully combat the infection. If this proves to be the case "vaccine therapy" may be tried. It has been known for a long time that injection of dead cultures of bacteria assists the body in elaborating elements which aid in overcoming the infective agent, but until Wright's method was announced no rapid or clinically practical means were at our disposal to ascertain the good or bad effects of the treatment. It is now possible to give the vaccine injection and, day by day, watch its influence on the opsonic power, thus enabling us to omit, increase or decrease the dose, as may seem indicated.

What the practical results will prove to be, it is as yet too early to say, but in any case the method has stimulated research along the lines indicated, and thrown a new light on many hitherto doubtful points.—*Amer. Journ. of Surgery.*

STOVAINE AS A LOCAL ANESTHETIC.*

Mr. G. L. Chiene read a communication on the "Use of Stovaine as a Spinal and Local Anesthetic." He said that the use of a general anesthetic was always a source of possible danger to the patient and now when the dangers due to the actual operative procedure had been reduced to a minimum the anesthetic might be regarded as the most dangerous factor in many operations. Bier first attempted the production of anesthesia by spinal injection. Cocaine was used, but as the after-results were often of a most unpleasant or even dangerous nature the method for a time fell into disuse. In February, 1904, Fourneau, a French chemist, first brought before the profession the hydrochlorate of amyleine, which he named Stovaine. This product, when injected into man, slowed the pulse and caused contraction of the pupil. Pallor was not induced but often flushing supervened. Dyspnea, oppression,

*Read before meeting of Edinburgh Medico-Chirurgical Society, Jan. 17, 1906.

uneasiness, or excitement was absent, and there was no tendency to syncope. It was certainly much less toxic than cocaine, and so could be given in larger doses if required. As after-result there was usually a slight rise of temperature which might last for some days. There was little tendency to sickness or vomiting, while headache and spinal neuralgia were rarely present. The general condition was good and the patient could enjoy an ordinary meal. Reclus, in July, 1904, gave the results of nine months' experience with Stovaine as a local anesthetic. He employed it in doses twice the strength of cocaine. Chaput maintained that many laparotomies could be performed under spinal anesthesia with Stovaine. In 100 cases, 45 operations were performed on the legs, 26 on the perineum, and 29 on the abdomen (hernias, hysterectomies, appendectomies, and ovariotomies). He stated that it was very useful in fractures and dislocations of the lower extremities. The height to which the anesthesia rose varied greatly with the dose, and his failures occurred only when small doses had been given. In his experience the after-results of Stovaine were much less severe than those of cocaine. The dose injected varied from four to eight centigrammes, and he did not care to employ it in patients over 65 years of age. Mr. Chiene had employed this drug on various occasions since October, 1904, combined with hemisine. In his experience a larger dose was required to produce spinal anesthesia than that recommended by foreign authorities. He used Tuffier's solution, 10 per cent. of Stovaine in sodium chloride solution. Sterilized solutions of the drug were supplied in *ampoules*. After injection into the spinal canal a sensation of pins and needles was felt in the legs and in about seven minutes the patient was unable to lift the limbs. At this time sensation to pain was lost though that to touch remained. Anesthesia commenced in the perineal region, then affected the toes and feet, and passed gradually up the limb. It passed off in the reverse order. The operations which he had performed under spinal anesthesia induced by Stovaine included inguinal hernias, transplantation of tendons, removal of tuberculous glands in the groin, operations for severe traumatic flat-foot, hemorrhoids, varicose veins of both legs, etc. Mr. Chiene was quite satisfied that with more experience both in technique and in the dosage of the drug failures would be exceptional. Lumbar puncture was now a routine method for diagnostic purposes in medicine and accidents were rarely heard of. It was too soon to compare the risks with those of general anesthetics, but it must be allowed that this method might be preferable in many cases. It was stated by some authors that gangrene of the skin occurred at the point of injection, but in Mr. Chiene's experience with the combination of drugs already mentioned, he

had not had a single case of gangrene of the cutaneous tissues.—*The Lancet*, Jan. 27, '06.

ABSTRACTS.

Serum Treatment of Dysentery.—L. Vaillard and C. Dopter (*Bulletin de l'Académie de Médecine*, Paris) for years have been making a special study of dysentery and its treatment with a prepared serum. Shiga and Kruse used cultures alone to immunize the animals in making their serum, ignorant of the existence of a soluble dysenteric toxin. Vaillard and Dopter immunize their horses by inoculation on alternate weeks with progressive doses of living bacilli and of the soluble toxin. The toxin is obtained by filtering through porcelain a culture in Martin bouillon kept for twenty days at a temperature of 37 C. The injections are made under the skin at first and later in the veins. The serum of the horses acquires immunizing properties against the bacillus of dysentery and against its toxin. Ninety-six patients with dysentery have been treated with the serum. The number includes 50 with from 15 to 20 stools in twenty-four hours; 18 with from 30 to 80; 24 with from 80 to 150, and 4 with from 150 to 288 stools. All recovered except one patient in the last group. The serum has an almost immediate influence on the local and general symptoms of the dysentery, and recovery is complete in two or three days in the mild and in four or six days in the severest cases. Relapses were observed only twice, and in these instances they occurred the tenth day or third week after the last injection of serum, when its effect was exhausted. Some of the patients had been treated for weeks with calomel, lavage of the intestines, etc., without appreciable effect. The condition changed as soon as the serum was injected and the patients were cured in two or three days. The minimal dose is 20 c.c., injected under the skin, repeated once or twice in the severer cases. Its harmlessness has been amply established.

New Glandular Function of the Connective Tissue Cells.—J. Renant (*Bulletin de l'Académie de Médecine*, Paris) found nearly two years ago that the fixed cells of the connective tissue are endowed with a secretory activity which seems to confer glandular functions on them. Like the cells of the true glands, such as the parotid and pancreas, they elaborate in the heart of their cytoplasm a large number of granules possessing all the histologic and cytologic characters of the "pro-ferments." The granule grows to maturity in the centre of a vacuole. The cell does not throw off these granules as such, but acts like a true fer-

ment-producing gland, and redissolves its segregated granules before excreting the substance. He calls this the "rhagiocrinic function," coining the term from the Greek words for granule and select. Such a connective-tissue cell should henceforth be regarded as a true interstitial grandular cell. The cells in question are spherical, are able to migrate, and are the phagocytes *par excellence* of the connective tissue. Their "rhagiocrinic function" is in evidence in early life, and subsides when the organism has reached maturity. It is not lost, but remains latent until aroused by some irritation or other stimulus. The connective tissue thus forms an enormous gland whose elements can be aroused to glandular activity at any time. These elements pass through the stages of the round, migrating "rhagiocrine," then the fixed "rhagiocrine," then the branching, and then the anastomotic "rhagiocrine," growing more and more quiescent with age. The material secreted by the "rhagiocrines" has certainly some relation to the growth of the connective tissue, as the secretion lasts until the organism has reached maturity and is then suspended. A large number of these connective-tissue "rhagiocrines" still persist free in the fluids of the serous cavities, even in the adult. They migrate by their own ameboid movements, and are not dependent on the circulation. They retain their extremely active phagocytic properties long after they have settled down into quiescent fixed cells, incorporating blood corpuscles and foreign bodies with like avidity. The task now before us, he declares, is to learn the means of stimulating and controlling this "rhagiocrinic function." It may prove of far-reaching importance.

The Glycosuria Caused by Saline Solution.—Underhill and Closson (*Amer. Journ. of Physiol.*, Vol. xv., p. 321, 1906), as a result of experiments upon this question, conclude that the polyuria and glycosuria which follow the injection of sodium chloride into the venous circulation of the rabbit are, like phloridzin glycosuria, due to an increased permeability of the kidney, the amount of sugar in the blood being diminished. This permeability may be counteracted by the injection of calcium chloride together with the salt; the excretion of sugar is then diminished or arrested, the sugar content of the blood rises up to or above its normal figure, and the quantity of urine is lessened. If sodium chloride be injected into the cerebral arterial circulation, glycosuria is produced with a rise in the sugar in the blood and without polyuria. This phenomenon is referred to a poisoning effect on the brain, causing disturbance of respiratory processes, dyspnea, etc., such as follow the injection of magnesium sulphate under the skin and the administration of anesthetics and various drugs.—*B. M. J.*

School Hygiene.

MEDICAL INSPECTION OF SCHOOLS.

Dr. Roberts, the recently-appointed Medical Inspector for the Public Schools of Hamilton, Ontario, has already made his first report to the Board of Education. This is an interesting document and shows clearly the need for such inspection. Dr. J. E. Laberge, the Medical Health Officer of Montreal, has submitted to the Health Committee of the Montreal City Council the detailed report of the Medical Inspectors of Schools in Montreal, from October 1st, 1906, to May 1st, 1907. This report shows that over twenty thousand children were in some way affected, as the following table will show:

Badly nourished	954
Inflammation of the glands	1,406
St. Vitus dance	30
Heart troubles	104
Lung troubles	89
Skin diseases	254
Deformity of vertebral column	127
Deformity of chest	88
Defects of vision	1,022
Deformity of limbs	154
Defects of hearing	256
Conjunctivitis	222
Trachoma	..
Difficulty in nasal breathing	832
Decayed teeth	9,478
Enlarged tonsils	2,453
Adenoids	746
Diphtheria	5
Scarlet fever	4
Measles	26
Smallpox	..
Whooping-cough	19
Mumps	5
Chickenpox	5
Erysipelas	..
Vermin	1,472
Itch	46
Impetigo	27
Ringworm	97
Pemphigus	1
Paralysis	1
Headache from study	205
Children dismissed from school on account of infected houses	82
Children dismissed on account of uncleanliness	45

Condition of the Schools.

The following report shows what is the condition of the schools in regard to situation, ventilation, etc.:

Number of schools situated in a basement	3
Number of schools situated in a garret	1
Number of schools of bad appearance	3
Number of schools of poor and miserable appearance	3
Number of schools of poor and dirty appearance	1
Number of schools with damaged and decayed walls	1
Number of schools of good appearance	112
Number of schools ventilated by windows	53
Number of schools with insufficient ventilation	4
Number of schools with no ventilation at all	3
Number of schools well ventilated	64

It is shown that in many schools the chairs and tables are not adapted to the height of pupils. In five schools the floors are swept without being moistened. Then comes the astonishing report that there are three schools that only have their floors washed twice a year; one school has its floors washed once per annum; while yet another school has its floors washed every two years. Five schools have defective flooring. Quite a number of schools are reported to have defective lighting. Over twenty schools have classes that are overcrowded.

Dr. J. E. Laberge on Situation.

Reporting on the above condition of the schools, Dr. J. E. Laberge, in a special report, says:

"I have the honor to submit to you my report on the medical inspection of schools up to the 1st of April last. At that date the funds set aside for the service having been exhausted, we had to discontinue the service.

"One of the most important duties of the Health Department is to prevent the dissemination of contagious diseases. This report shows that the school is one of the places where contagion is spread most surely. By the medical inspection of schools you have in a great measure decreased this source of infection.

"The number of cases reported by our inspectors is considerable, and without the inspection such children would have continued to go to school and spread the contagion everywhere.

"In general, the physicians you appointed fulfilled their duties with zeal and much tact. Their relations with the principals of schools were always most cordial and kindly. The principals of schools finding the good that results from this service and the slight inconvenience it causes the scholars, desired it to be continued.

"Duties of Inspectors.

"The duties of the medical inspectors consist in the daily inspection of each of the schools assigned them. When they find a child suffering from a transmissible disease requiring him to be sent home, they notify the principal, who alone has the right to send the children home.

"Since the beginning of the year we have made two general inspections of all the children in the schools, and all that was found wrong with any of them was noted, and the Health Department was notified accordingly.

"The result of this inspection is very evident, especially since the second one is over, which is the complement of the first.

"The reports received from the medical inspectors establish the fact that the cleanliness of the children has increased 50 per cent., and that the schools are now better ventilated and lighted.

"The number of children affected with diseases of the eye was 1,343; of the ear, 417; adenoid tumors and hypertrophy of the tonsils, 3,029. These figures show to what an extent disease was prevalent in the schools. Many of those affected were suitably treated, so that by this inspection you have prevented infirmities that would have become chronic and affected the patient even in adult life.

"Adenoid tumors are the cause of permanent lesions of the ears, and serious troubles of the respiratory organs. Even the brain is affected by such tumors. A number of children who appear unfit for work, indolent, more or less idiotic and sometimes vicious become docile, studious and even brilliant as soon as the nasal obstruction has disappeared. Unfortunately, in families, this affection passes unnoticed. They do not know how it injures the child who grows up with the infirmities which these tumors engender, the infirmity being often both physical and moral.

"Danger from Decayed Teeth.

"The cases of decayed teeth reported numbered 9,478. A great care should be given to that affection which is the cause of many troubles, especially those from bad digestion. Bad teeth are also a continuous focus of infection for the child's mouth. Surely the fact does not need any comment.

"Many of those children have not received all the benefits desirable from medical inspection, for, in a number of the schools, no notice was taken of those only slightly affected, in order not to create too much trouble in the establishments.

"By continuing the inspection another year, the work could be done more completely on account of the varied experience acquired.

"In most cases it is sufficient to draw the attention of parents

to any disease with which the children may be affected, when they at once take the measures necessary to effect a cure.

"We have received but few complaints from parents on account of their children having been sent home from school. The publication of the deplorable condition in which the scholars were found upon the first visit of the inspectors (October and November last) caused an uneasy feeling through the population. To-day there are but few who do not understand the importance of this service and the people would be pleased to see the inspection continued. They understand now that it is for the protection of the children, and they see its usefulness and necessity.

"Spectacles Needed.

"To complete this report I consider that I should direct your attention to the large number of poor children (875) requiring spectacles, who made a request for them in writing, accompanied by a certificate from the principal of their school attesting that their parents were too poor to purchase them.

"I would also draw your attention to the large number of children (1,188) suffering from pediculosis or scabies. If you would complete the medical inspection by a service by nurses, who would visit the school and attend to the children so neglected by their families, you would be filling an urgent want. These nurses could also treat light affections, such as bandaging of sores, treating certain eye diseases, etc. The truly remarkable results obtained in New York City by the attendance of these nurses, show that the few hundred dollars you devote to this purpose would be money well spent." H. MacM.

Laryngology, Rhinology and Otology

IN CHARGE OF
PERRY G. GOLDSMITH, M.D.
TORONTO.

OPERATIONS FOR DEVIATION OF THE NASAL SEPTUM, WITH SPECIAL REFERENCE TO THE SUBMUCOUS RESECTION.

John Macintyre, Surgeon for Diseases of the Nose and Throat, Glasgow Royal Infirmary, addressed the students of Anderson's College Medical School in December last on this subject.

He mentions the enthusiasm that seems to go with the so-called new (first performed by Heylen in 1847) operation, and expresses a fear that the importance of other operations may be overlooked. Winslow (Trans. A. L. A.), is quoted. "While some degree of septal deviation is so common that it may almost be regarded as a normal condition, a deviation becomes pathological only when it interferes with normal nasal function, producing consequences that can rationally be attributed to the deformity; according to Beaman Douglass this occurs in from 11 to 12 per cent. of the cases only. Some of the most marked deformities that I have ever seen caused no detectable disturbances. We should operate, therefore, only for the relief of definite symptoms, and not simply because of anatomic abnormalities." The same writer very properly remarks that the best treatment for deviated septa may consist in avoiding operation, and in this connection it would be well to remind you of an interesting remark by Sir Felix Semon, "that no operation should exceed in magnitude the importance of the symptoms."

Macintyre enumerates the various methods of correcting deviations and describes more particularly the Gleason, Moure, Asch and Killian's submucous resection. He points out that some simple measure may suffice to give breath way, such as removal of the anterior half of the inferior turbinal or sawing off the apex of the crest of the deflection. One man familiar with a certain operation may get brilliant results, while another, operating by the same method, only occasionally, may have poor results and unfairly condemn the operation.

Macintyre agreed with Dundas Grant in stating that there was yet room for electicism and, furthermore, we will be better able to compare methods and results ten years hence.

INFLUENZA AS IT AFFECTS THE NOSE AND THROAT.

The *Practitioner* for January, 1907, is devoted to a consideration of the various manifestations of influenza. Sinclair Thompson takes up the nose and throat affections.

No doubt, Thompson says, the infection of influenza does enter the system through the upper air passages, and while a naso-pharyngeal catarrh is a usual accompaniment, it is not a necessary manifestation of the disease. The disease, as it affects the upper respiratory tract, is divided into two types, (1) inflammatory affections, (2) neuroses.

1. *Inflammatory Affections.*—Epistaxis may usher in the symptoms, together with all the symptoms of an ordinary acute rhinitis. Influenza cold seems to vary in different epidemics. Thompson's own experience points toward a more frequent involvement of the accessory sinuses of the nose than was the case fifteen years ago. Not infrequently this is mistaken for "supra-orbital neuralgia or face ache. Symptoms around the orbit may appear without pus being discovered in the nose. A case is cited in a boy eleven years of age who developed an intense edema without redness of the right eyelids and tenderness at the upper and inner angle of the orbit. No pus could be seen in the nose, but on incising the swelling, fluid pus escaped from the right frontal sinus containing the micrococcus catarrhalis in pure culture. A case is also mentioned showing the persistence of the pain, even after opening the frontal sinus and excluding antral infection. Ethmoidal retention was the probable explanation. Sphenoidal infection is accompanied by post-nasal discharge, pain referred to the occiput or deep between the eyes, and sometimes marked somnolence. Influenza infection may light up a previously quiescent sinusitis.

Pharynx.—A diffuse inflammatory condition of the naso-pharynx and pharynx with or without lacunar tonsillitis, is not uncommon. False membrane and quinsies may also form.

Larynx.—Acute catarrhal inflammation is very common. Swelling of the ventricular bands, ary-epiglottic folds and particularly the arytenoids and epiglottis is not uncommon. Inflammation and abrasion of the vocal cords account for the painful hoarseness. Septic edematous laryngitis occurs in rare instances and is extremely fatal.

2. *Neuroses: Nose.*—Anosmia is very apt to be a sequel of influenza. Recovery generally takes place even after many months, but occasionally it is permanent. Cacosmia is due in most cases to antral empyema rather than to a true neurosis.

Pharynx.—Paralysis of the soft palate has been observed, and

some dysphagia may be due to weakness of the constrictors of the pharynx. A condition of hyperesthesia or anesthesia is not unusual.

Larynx.—Various laryngeal palsies may follow influenza laryngitis. Abductor paralysis is the most common. It is doubtless due to a peripheral neuritis and the diagnosis has to be made from the numerous other possible causes of a lesion of the recurrent laryngeal nerve. It may clear up rapidly or remain for years.

Cough.—A barking, inveterate cough referred by the patient to the wind-pipe is another legacy of influenza. These persistent coughs may be due to pus from the nasal sinuses trickling back into the throat. This auto-intoxication may induce many symptoms suggestive of phthisis: Loss of flesh, sweats, rise of temperature, dyspepsia, expectoration of pus, etc. Alteration of the breast sounds may be noticed, due to diminished expansion. Sputum examination and tracing the pus to its true origin determines an exact diagnosis.

Treatment of Inflammatory Affections.—The patient should remain in bed until the acute stage is passed. He can be kept very warm with the bedroom windows wide open. Tenderness and neuralgia is met by having the head wrapped up in a woollen shawl; hot fomentations are applied over the affected side, or the patient may lie with his face on a hot-water bottle. If the maxillary sinus is involved and there are any suspicious bicuspid or molar teeth on the same side, they should be removed. The pain can be met with phenacetin, caffein, aspirin, and, if necessary, morphia. Thompson carefully avoids the use of sprays or lotions during the acute stage, since they may disseminate the infection and carry it to the ear. The following inhalation is used:

℞ Menthol ..... ½ dr.
Tinct. of eucalyptus ..... 3 oz.

A teaspoonful of this is put in a pint of steaming water, and the vapor inhaled up and down the nose every two or three hours. If necessary the maxillary sinus may be punctured through the inferior meatus. Packing the middle meatus each day with a five per cent. cocaine solution frequently relieves the frontal and sphenoidal sinuses. After the acute stage is passed, a simple alkaline lotion is used. Change of air may be necessary to bring about complete relief.

Treatment of Neuroses.—A guarded prognosis should be given as to the relief of anosmia. If the nose is healthy, it is best to refrain from local measures. General treatment, such as strychnia electricity, will do best for this, as well as the laryngeal palsies.

The obstinate paroxysmal cough responds best to sedative sprays and lozenges of menthol, heroin, codeia. "Stomach coughs" are helped by morphia and opium, or the following may be of value: A tablespoonful in water three times a day.

℞ Diluted hydrocyanic acid ..... ½ dr.
Diluted nitric acid ..... ½ dr.
Glycerine ..... ½ oz.
Infusion quassia ..... 6 oz.

A tablespoonful in water three times a day.

THE DIAGNOSIS AND TREATMENT OF INFECTIVE THROAT CONDITIONS.

Meredith Young, Medical Superintendent Stockport Corporation Hospitals, in *The Practitioner* has a very instructive article dealing with some of the acute infections of the throat, which are in so many cases of grave importance. Scarlatinal sore throat is usually unmistakable. It may be confounded with simple and septic tonsillitis, measles, initial smallpox, diphtheria, secondary syphilis, etc. The following tabular form is of value in the diagnosis.

I. As to the Deposit or Exudate.

	Color.	Consistence.	Ulceration.	Persistence.
1. Scarlet Fever.	Yellowish white or dirty and sloughing.	Very soft and easily broken up.	Distinctly present.	Disappears very slowly.
2. Septic tonsillitis.	Whitish or Yellowish.	Mucoid.	Very slight.	Disappears fairly rapidly.
3. Muscular tonsillitis.	As above.	As above.	Very rare.	As above.
4. Diphtheria	Whitish, may be brown or black owing to hemorrhage.	Tough and adherent.	Slight.	Rapid disappearance.
5. Syphilis.	Dirty.	Fairly tough; removal often followed by bleeding.	Almost invariably and frequently extensive; symmetrical, superficial and often kidney shaped.	Not long duration.
6. Thrush.	Dead white.	Soft and easily removable.	None.	Brief.

As to the General Characteristics.

	Distribution.	Color.	Symmetry.	Pain.	Glands.	Local Accompaniments.	Pyrexia.	Progress.
1. Scarlet Fever.	Palatal arches uvula tonsils and sometimes pharynx and roof of month. Buccal mucosa usually normal. Does not involve larynx.	Vivid red.	Symmetrical	Considerable	Usually unaffected in early stages. Enlarged and may suppurate.	Strawberry tongue.	Marked.	Disappears slowly.
2. Simple Tonsillitis.	May extend over fauces palate and pharynx. Larnyx not involved.	Deep red, and almost shining.	Generally bilateral.	Considerable	Gland at angle of jaw usually enlarged and painful at early date.	Furred tongue and foul breath.	Marked.	Disappears rapidly.
3. Septic Tonsillitis.	Rarely extends beyond base of palate. One or both tonsils affected.	Deep red often almost purple.	Usually though not always unilateral.	Very severe.	Slightly enlarged at early date but quickly subsides.	Thick furring of tongue.	Marked.	Usually slow. Follicular abscess
4. Diphtheria.	Extremely variable usually settles on tonsils first. Larynx.	Very faint reddening.	Asymmetrical.	Usually slight or absent.	Frequently enlarged but suppuration rare.	Typical odor. Frequent croupous symptoms or nasal discharge. Subsequent local paralyses.	Around 102°.	Rapid disappearance Few days only.
5. Syphilis.	Involves all fauces palate, pharynx and larynx.	Bright red.	Symmetrical	Little or none.	Seldom enlarged.	Ulceration. Mucous patches. Sulci on tongue, etc.	None.	Persistent. Rapidly clears under treatment. Slow.
6. Follicular Tonsillitis.	Rarely extends beyond base of soft palate. One or both tonsils affected.	Bright red not so deep as 2 and 3.	Almost always bilateral.	Fair amount.	Slightly enlarged at early date but quickly subsides.	Thick furring of tongue.	Slight.	
7. Measles.	Palate appears to be chiefly but slightly affected.	Red blush. Tiny red papules.	Symmetrical	Slight or none.	Normal.	Koplick's spots.	Marked.	Rapidly subsides.
8. Thrush.	Variable.	Almost normal.	Asymmetrical.	None.	Normal.	Patches on tongue. Buccal mucosa.	None.	

In *septic tonsillitis* the onset is usually sudden, without vomiting, which ushers in scarlet fever; pulse rapid, increasing with temperature only. If a rash be present it is always erythematous and not punctiform, and rarely lasts more than a day.

Follicular tonsillitis, though perhaps most commonly confounded with diphtheria, is, as a matter of fact, an affection which ought to be more readily distinguished from it than anything else. The points in common are usually the low temperature, rarity of ulceration, fairly rapid disappearance of the local patches and the slight involvement of glands. They differ in four main points.

1. In follicular tonsillitis the patches are mucoid and are easily removable, sometimes by mere douching with weak salt or boracic solution, practically always by swabbing with cotton wool. In diphtheria the patches are tough and only removable, if at all, by firm and repeated swabbing.

2. In follicular tonsillitis the patches rapidly reappear after being cleared away, in fact may do so in half an hour.

3. The mucosa is a fairly bright red color in follicular tonsillitis, whereas, in diphtheria, it is only faintly, if at all, reddened.

4. Edges of exudate taper off gradually in tonsillitis, while in diphtheria there are distinct cleft-like edges which often curl up.

Young describes a case of diphtheria as "A prostrate, pallid, pulseless, placid, painless patient, with a putrid breath and a temperature about 102 deg." Bacteriological examination is not referred to, for, though frequently helpful, it is not, for the general practitioner at all events, of much immediate assistance. (The reviewer thinks this is not good doctrine, since one is so easily misled by the milder forms of diphtheria that the only positive means of diagnosis is by a bacteriological examination.) A form of septic sore throat due to milk is described. It may closely resemble diphtheria in both the clinical appearance of the throat and the constitutional depression. *Drain throats* are also alluded to, in which there is a septic pharyngitis due to the inhalation of drain or sewer gas.

Treatment.—As a general rule, a fairly brisk saline purge is a *sine qua non,* especially in septic tonsillitis. Young does not give a purgative during the first week of scarlet fever or diphtheria. A simple enema seems to avoid grave complications. Salicylates are given first place in simple, septic and follicular tonsillitiis, but are to be avoided in diphtheria, because of depression and possible effects on the kidneys. In syphilis constitutional treatment is of most importance. In diphtheria antitoxine *early and in large doses.* Antitoxine is also of decided value in cleaning up post-scarlitinal rhinorrhoea (cases of mixed infection,

diphtheria and scarlet fever. G.). Salophen is of value when there is a rheumatic element, 10-15 grs. every three or four hours. Iron and strychnia are also indicated as general stimulants.

Local.—One must not neglect to consider the effect the infection may have on the nose and ear. Little good comes from applying remedies, unless the mucus or other covering of the diseased area is removed. Solutions of borax, boric acid, *very weak* sulphurous acid or liq. soda chlorinata and common salt solution are good solvents; preference is given to borax and sodi. bicarb, since they dissolve mucin (a 2 per cent. solution of sodi. sulphate is better. G.). For nasal or throat douching the Higginson syringe and the ball syringe are condemned A douche may be considered much safer. As disinfectants, formamint, sublimin, hydrarg. perchlor., acetozone, boric acid and ichthyol are advised. A good solution is made by using the following—sodi bicarb., grs. xii; acid carbol. pure, grs. 1½; sodi chlor., gr. ii—dissolved in a tumbler of tepid water. Formamint as lozenges and spray is strongly advocated. Ichthyol is better in the severe septic cases—ichthyol, grs. 50, sodii chlor., grs. 25, water six ounces. In nasal douching it is of the greatest importance that the patient *keep his mouth widely open and breathe quickly in and out.* Cocaine or storanine are advised as applications after the stronger antiseptics, if the pain and suffering demand it. A 20 per cent. solution is mentioned, but surely this would be dangerous in many cases.

P. G. G.

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

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Editorials.

A PSYCHIATRIC CLINIC FOR TORONTO.

In February, 1907, the first number of *The Bulletin* of the Toronto Hospital for the Insane, a journal devoted to the interests of psychiatry, was issued. Among other matters of importance referred to in its pages the proposed establishment of a psychiatric clinic upon a site near the Toronto General Hospital is mentioned. From an article published in *The Globe,* Toronto,

it appears that such a clinic will be established by the Government of Ontario, $100,000 being mentioned as the sum to be spent on the construction and the fittings. It is intended, we learn, that this clinic is to occupy a separate building in connection with the new hospital, with accommodation for 100 patients, and it is to contain every modern requirement for the treatment of acute cases of insanity. There will, also, be laboratories with lecture rooms, and provision will be made for research work in pathology, physiology and psychology. Opportunities will, also, be given to physicians and medical students to study cases of mental disease. The new clinic is to stand in close relation to the medical faculty of the University of Toronto and the new hospital. It will, also, have a dispensing department. It is said that the Kraepelin Clinic, of Munich, Germany, will be used architecturally and for the equipment as a model for the clinic. Improvements in the methods of treating acute cases of insanity are said to have been introduced into other parts of Germany from the Munich clinic. Similar improvements in America are prognosticated from the operation of the Toronto clinic.

An important result of the establishment of the new clinic will be the closing of the old Toronto Asylum. Acute cases of insanity will be sent to the clinic, and on recovery they will be discharged as patients who have been treated in an hospital for mental diseases. Should they develop into chronic cases of insanity they will be sent to existing asylums, where the cottage accommodation system prevails.

The operations of the psychiatric clinic will enable its medical staff to make more striking exhibits of cures of insanity than has fallen to the lot of the medical staffs of the eight Provincial asylums; whether the total percentage of cures of insanity in Ontario will be higher than it has been remains to be proved.

From the standpoint of medical teaching and clinical study a psychiatric clinic should, and doubtless will, be welcomed by all who are interested in straightening the tangled threads and raveled skeins of mental disease. Is it a lesser stigma to have been an inmate of a psychiatric clinic than of an old-fashioned asylum? The question involves a sentimental consideration; but the stigma consists in having been reputed insane. Incarceration in a psychiatric clinic in place of an asylum, will not blot out that fact. Besides, the operations of a clinical hospital bring an insane patient's infirmity to the notice of more persons than if he were immured in some asylum situated in a country place.

Again, the clinic will not be as favorably situated as a country asylum for "the rest cure," owing to the noises of a great city.

The new department will afford to professors of psychiatry an arena for the display of skill in diagnosis and prognosis. Whatever results may attend the exercise of psychiatric therapy—improved mental conditions or the reverse—the professor must show that he understands and can expound the subject matter; for the diagnosis and prognosis of mental disease will ever be of absorbing interest to the friends of the patient, to physicians and students of medicine and to others interested in medico-legal questions. To understand a difficult case of mental disease is not, by any means, to possess a lever suitable for the removal of the difficulty; in fact, an exact comprehension of the difficulty frequently reveals, that it cannot be removed. As we said in an editorial, published in this journal, May, 1906, "To measure the professional skill employed in the treatment of the insane in the asylums of Ontario by the output of cures or the probational discharges of patients, improved or unimproved, would be a fallacious test. But that is just another way of saying that, in a large number of the insane of Ontario, the prognosis as to the recovery of sound mentality is unfavorable. By the exercise of admirable care and good hygiene, the lives of the insane are conserved; but that which makes life precious is rarely restored." F. S. Toogood, in *The Lancet,* September 15, 1906, states that out of more than 2,000 cases of alleged insanity treated during the past ten years at Lewisham Infirmary, 50 per cent. recovered, 10 per cent. died, and only 39.5 per cent. were sent to asylums. Should there be an approach to such results at the Toronto Psychiatric Clinic the medical profession of Ontario would be delighted.

Some of the advantages likely to accrue from the treatment of incipient insanity at the Toronto Psychiatric Clinic are: (1) The benefit of the patients themselves; (2) the increased efficiency of the nursing profession; (3) the improved clinical training of medical students; (4) improvements in the scientific study and practical treatment of insanity, when the necessary work is done by physicians who are in touch with other active workers and teachers in science and medicine.

Too much credit cannot be given to our collaborator, Dr. D. C. Meyers, of Deer Park, for his work in this connection, as also to Dr. C. K. Clarke, medical superintendent of Toronto Hospital for the Insane. J. J. C.

THE PHYSICIAN'S DUTY IN REGARD TO CONSUMPTION.

In a recent issue of *The Star*, Toronto, an editorial appears, founded on a dictum of Dr. J. H. Elliott, ex-Medical Superintendent of the Gravenhurst Sanitarium. Dr. Elliott is made to claim that, through ignorance or worse, the average medical practitioner of Ontario is not doing what he might towards stamping out consumption, because he fails to diagnose the cases of incipient consumption which he meets in general practice.

Dr. Elliott also states that seventy-five per cent. of all consumptives in the early stages of that disease can be cured by sanitarium methods, while only fifteen per cent. of moderately advanced cases, and only one per cent. of far-advanced cases are found to respond to treatment. Accepting as true Dr. Elliott's statements, it is also true that doctors, who cannot be rightly accused of carelessness, ignorance or something worse, fail to recognize marked lesions in the lungs of patients. We know of several cases in which mistaken diagnoses have been made by competent men, but will instance this one, taken from the writer's case book: "April 19, 1880. J. Q., ætat. 24; weight, 125 lbs.; height, 5 ft. 7¾ in.; measurement of chest on forced inspiration, 34½ in.; forced expiration, 31¼ in.; respiratory murmur good, except at apex of left lung, where some mucous râles were noticed. The patient is a law student, a hard worker and a light eater. The evidence in favor of phthisis is strong. Ordered him a very nutritious diet, with ½ oz. emuls, ol. morrhuæ t.i.d.; salt water morning bath; as much outside air as possible; advised him to get his weight accurately every week. Aug. 1, 1881—Saw J. Q.'s death in *The Globe*." It transpired that after getting the writer's opinion, J. Q. took out a life insurance policy. The examination was made by a very competent examiner, since dead. J. Q. subsequently went to a town in Michigan, where he resided until he died of consumption. Would Dr. Elliott say that this examiner in life insurance was careless, ignorant or deaf? His contemporaries would not give a verdict of guilty on any of these counts.

Examiners for life insurance companies generally strip their applicants, before examination—but there are others. A confrère of considerable auscultatory experience tells us, that carelessness in

diagnosing lung disease is the besetting sin of the average doctor, just as mendacity characterizes the lawyer and dogmatism the theologian. He suggests that doctors should eschew inane methods of examining their patients. So far as the ladies are concerned, he says, examining doctors will find no difficulty; the men will cheerfully expose the cuticle if the doctor so wills it. This witness is, if anything, a little more severe on doctors than Dr. Elliott; but it is well for the average practitioner to learn what his severest critics have to say against him.

It would certainly help to keep the doctor up to the mark, if backward people were to become solicitous about the condition of their lungs. When to have incipient phthisis spelled death in a few years, 'twas folly to be wise. Not so in our day, for medicine teaches, that phthisis in the early stages is curable. Hence the advisability of a patient consulting a doctor for a severe cold instead of taking some medicine. On the other hand, a doctor cannot use his senses of sight, hearing and feeling too much in diagnosing lung disease. And yet, with all care and scrupulosity, doubts will intrude. If a case of incipient lung disease is brought to a doctor's notice, it is not possible for him to be certain, from clinical evidence alone, that the condition is tuberculous, unless tubercle bacilli are present in the sputum. In the early stages of consumption, the physical signs—slight dulness on percussion and moist sounds at the apex of one lung may be suggestive, in fact indicative, of phthisis; but, in such cases there may be no tubercle bacilli in the sputum.

And that circumstance raises a question of great moment. When should a case of consumption be reported to the health authority? In the writer's opinion, a case of consumption should be reported if tubercle bacilli are found in the patient's sputum. It is the business of the public health authority to provide for the destruction of the tubercular sputum—the source of tubercular infection.

Doctors know that sanitarium life is serviceable in incipient consumption; but sanitaria are few and consumptives are many. Would editors of papers who deplore the morbidity and mortality from "The great white plague" help to build, equip and manage more sanitaria in Ontario? The doctors will help to find the cases to fill a good many sanitaria.

Stricken people, however, have to play their parts, while life is left, and a long stay at a sanitarium does not suit a lean purse, or an exacting rôle. But the stimulative education of sanitarium life lops off whims and grafts right notions of healthy living in their stead. What a pity, say you, that some of these sanitarium notions—fresh air, good food, the solarium—were not taught at medical schools thirty years ago. Aye, some of them, or their congeners, were taught; but the seed fell by the wayside.

CONTACT-INFECTION AS A MEANS OF PROPAGATING TYPHOID FEVER.

Authorities are agreed that typhoid fever is propagated by means of infected water, milk and shellfish; but it may also spread by contact-infection, derived from the excretions of a typhoid fever patient, or even from a convalescent. An outbreak of typhoid fever occurred recently in one of the female wards of he Lariboisière Hospital, Paris, and the circumstance was reported by Dr. Gandy at a meeting of the Faculty of the Hospitals. Three cases occurred simultaneously, eleven days after a case of typhoid fever had been admitted to this ward; then, in succession, and after two other typhoid cases had been admitted from outside places to the same ward, three fresh cases appeared in patients who had been domiciled in the hospital for some time. The facts pointing to some form of contact-infection in the three first cases were: They occurred simultaneously, eleven days after the admission of the case of typhoid fever; two of the patients occupied beds near the typhoid patient, who had been brought in from an outside place; the third case was the nurse, who waited on this same patient. The sudden occurrence of these three cases showed they were due to direct contagion originating in the ward. The water used in the hospital was not to blame, as nothing of a similar kind was observed within other wards of the Lariboisière. Several suggestions were offered during the ensuing debate on the paper. Dr. Rist insisted that a frequent mode of contact-infection was by fever thermometers and soiled basins. Dr. Achard thought that in hospitals a habitual mode of contact-infection was through the dejections of the patients, the urine-

bottles, and finally, from cultures of Eberth bacilli made in the hospital laboratory.

Dr. Widal said on this subject: "The propagation of typhoid epidemics occurs through drinking water; but cases in which typhoid fever is evidently communicated by contact-infection are observed in families and in hospitals. The inquiry made in Germany, at Koch's instigation, to ascertain the most reliable means of stamping out typhoid fever, showed that the patient, the persons who approach him, and the objects which touch him may serve to transmit the disease. Contagion is effected particularly by the hand, which touches the body of a typhoid patient or the objects which have been contaminated by fresh or dried fecal matters, or by the patient's urine. The infected hand serves afterwards as a vehicle to transport the germ through the intermediary of different kinds of food carried to the mouth. A relatively immediate contact is, therefore, necessary to open the way to contact-infection. This explains why contagion occurs in persons living in close contact with typhoid fever cases, particularly nurses. The hygiene of the hand ought to ceaselessly occupy the attention of nurses caring for typhoid patients. Not only should these nurses wash their hands, but they should disinfect them after touching the patient."

Dr. Hiss, while finding typhoid bacilli in the stools in 80 per cent. of the cases examined during the febrile stage, stated that the convalescent cases which he examined gave uniformly negative results, and this rapid disappearance of Eberth bacilli from the stools after convalescence was apparently confirmed by others. This is, however, by no means the invariable rule. Evidence collected by the Royal Institutions for Bacteriological Research in Germany shows the spread of typhoid fever by convalescents, whose excreta contain Eberth bacilli after ten weeks from the beginning of the illness or from the beginning of the last relapse.

Dr. Lentz, at Trier, discovered twenty-two typhoid bacilli carriers, to seven of whom other cases, often multiple, were traced. A. Besserer and J. Jaffe found typhoid bacilli in the stools of four persons, who had had typhoid three months, six months, four years and seven years previously. These and similar reports by other observers prove that typhoid bacilli persist in the stools after the recovery of patients, their persistence being due

either to chronic infection of the gall-bladder or to intestinal conditions, which produce stools offering a favorable medium for the growth of the Eberth bacilli.

The persistence of typhoid infection in the urine of typhoid cases is now recognized, as many investigators have worked in this field. All agree that, if they appear at all, they persist in the majority of cases into convalescence. Dr. Richardson's conservative statement is that they may persist for weeks, occasionally for months, rarely for years.

Typhoid bacilli may also persist for considerable periods in the sputa of patients having a complicating bronchitis or pneumonia. Seven weeks is the longest period recorded. Thus far no effective method of eliminating the typhoid bacilli from the intestinal tract seems to have been discovered. Urotropin has been used for sterilizing the urine of patients convalescing from typhoid fever, and the testimony is, in the main, in its favor.

Fortunately, the adult or older child convalescent, in many cases, passes the stools and urine in a water closet, so that in their cases, danger of infection through the hand is largely eliminated. With the infant it is different, since the diaper or vessel is handled and the infant cleaned by a nurse. In the absence of care, or through lack of knowledge, this may give opportunities for infection of the hands of the nurse, who may infect herself or others in the family whose food she prepares. An instructive case in which typhoid infection was produced in this way is reported by Dr. Southworth in *Annals of Pediatrics,* March, 1907.

J. J. C.

EDITORIAL NOTES.

Aristochin Tasteless Quinine).—Aristochin is a carbonic ether, a neutral compound, containing 96 per cent. of quinine. It is richer in quinine than the hydrochloride of quinine, which contains 81.7 per cent. A white, tasteless powder, insoluble in water, and saliva, soluble in the acid contents of the stomach. Dreser says that it is not precipitated from the acid contents of the stomach by the alkaline secretions of the intestines. It is ordinarily used in the same doses as quinine salts. It is administered to children in powders, containing doses of 1½ to 4½ grains, according to the patient's age; to be repeated three or four

times in twenty-four hours. It may be very conveniently given to young children in milk; taken in this way the little patients need not know that they are taking a medicine. Aristochin may be prescribed with advantage, instead of quinine, in the treatment of whooping cough. Binz commences with a small dose and increases it till the child is taking twice daily 3.8 grains for each year of age, or in infants ⅓ of a grain for each month. But, as a rule, a child does not require a higher dose than 22 grains daily, or an infant over 1½ grains. Under the influence of such doses, it is said, the attacks of coughing rapidly diminish in number and severity. Aristochin should certainly be welcomed by the attendants of sick children, who must have found the administration of quinine by the mouth an almost insuperable task. The hypodermic administration of quinine is painful and not quite free from the danger of infection, although this method has the sanction of Malafosse and Hertz. The rectal route for administering quinine to children is untrustworthy, as these patients cannot retain enemata except for a short time. An alcoholic or ethero-alcoholic solution of quinine applied to the skin with friction is of doubtful efficacy, owing to the fact that only a small quantity of quinine is absorbed by the skin under such conditions.

The Diet of Infants.—Some mothers seem to think that their babes are not thriving, or at least have not the appearance of thriving, unless they are "fine and fat." In some instances an irritable child, suffering from teething, is allowed a quart of undiluted milk a day and, for extras, a share of what is going at the table, viz., potatoes and meat gravy. During hot weather the intestinal canal of a babe may suffer from the irritating products of indigestion and diarrhea may ensue. Prevention being easier than cure, it would be in the child's interest if its diet were simple and suitable to its age. Infants twelve months old do better on a pint and a half of milk (imperial measure), diluted with half a pint of barley water than on two pints of whole milk. Between six and nine months one pint of milk is usually sufficient, provided that barley water, to the extent of a third of its volume, be added. Between the third and fifth months equal parts of milk and barley water should be given. Infants under two months should get half a pint of milk and the milk should

be diluted with rather more than its volume of barley water. Barley water prepared from pearl barley is a useful demulcent and is slightly nutritious. Some practitioners advise plain sweetened water as a diluent of milk given to infants. The dilution of cow's milk is the important feature in the artificial feeding of infants. When an infant seems hungry, when it coughs, when its stools have too pronounced an odor, when it seems indisposed in any way, the fault commonly lies in the direction of overfeeding. Even if overfeeding be not the fault, when an infant is suffering from teething or other source of reflex irritation, its food supply ought to be reduced in quantity.

The Untoward Effects Produced by the Salicylates on Children.—In an article published by Langmead in the London *Lancet*, June 30, 1906, some conclusions are drawn as to the effects of large doses of the salicylate of sodium on children. (1) Salicylate of sodium sometimes causes in children the appearance of a clinical syndrome resembling diabetic coma (stupor, dyspnea, coma, acetonomia. (2) The toxic dose of the drug varies, appearing to depend (barring idiosyncracy) on constipation in the patient. (3) Acetone may be found in the patient's urine and on his breath. The presence of acetone is one of the first symptoms of the untoward effects of the salicylate of sodium and is a real danger signal. (4) The treatment consists in reducing the acidity of the child's urine by the free administration of bicarbonate of sodium and the production of catharsis. Dr. Langmead thinks that the knowledge of these facts should not cause physicians to give up the administration of salicylate of sodium to children in suitable cases; but, on the contrary, should help to put them on their guard against the accident arising from its use, once the danger is known.

A Few Ontario Statistics on Tuberculosis.—The following figures quoted from a pamphlet issued by Charles A. Hodgetts, M.D., Chief Health Officer of Ontario, show that here as well as elsewhere, tuberculosis destroys life at an early age. "Note the following figures showing the deaths from tuberculosis in this Province. In 25 years (1880-1904), 64,928. In 1904 there were 2,877 deaths out of a total of 30,920 from all causes, or 1 person out of every 10 who died in that year died from tuber-

culosis. As a proof that no age is immune from the deadly effects of tuberculosis, note the returns for 1904:—

No. of Deaths.	Age.
7	1 year.
52	2 years.
26	3 "
9	4 "
17	5 "
51	5 to 9 years.
77	10 " 14 "
276	15 " 19 "
419	20 " 24 "
411	25 " 29 "
319	30 " 34 "
270	35 " 39 "
212	40 " 44 "
162	45 " 49 "
257	50 " 59 "
176	60 " 69 "
104	70 " 79 "
13	80 and over.
21	Not stated.
2,877	All ages.

Were the decedents from tuberculosis under 1 year and 2 years of age affected by hereditary or accidental tuberculosis? Hilton Fagge says it is impossible to draw the line in such cases, as naturally the children of an infected parent are more liable to accidental contamination. In the April number of this journal, p. 240, we quoted the opinion of Prof. Calmette, of Lille, who states that "the baby is contaminated with tuberculosis in *the family circle* by soiled objects put into his mouth by himself or others." Admitting the full force of the evidence showing the contagious origin of tuberculosis, the existence of parental, grandparental or collateral tuberculosis should be mentioned on the return of death of any person dying of tuberculosis.

Hemostasis in Hemophilia.—At a meeting of the Surgical Society of Paris, March 6, 1907, Dr. Broca advocated the use of fresh human or animal serum, by intravenous or hypodermic injection, in cases of hemorrhage in hemophiliacs. To produce hemostasis in an adult, 10-20 cubic centimetres of fresh serum injected into a vein or 20-30 cubic centimetres injected under the skin are ordinarily sufficient. In children, doses of half these strengths suffice. To prevent hemorrhages similar doses may be used when cutting operations are required in bleeders. In

practice Dr. Broca said if one cannot wait twenty-four hours and practise an antiseptic bleeding from the carotid artery of a rabbit, in order to obtain some fresh animal serum, Roux's antidiphteritic serum will answer. Dr. Broca added, that fresh samples of Roux's serum are placed on the market every month by the Pasteur Institute people. A surgeon, he said, should not in reliance on this serum, do an optional operation on a bleeder; but should not hesitate to use the serum if obliged to operate for appendicitis or strangulated hernia. At a subsequent meeting of the Paris Surgical Society, March 20, 1907, Dr. Broca reported the case of a lad aged 11 years, whose hemophiliac antecedents were well known to him, and who had been brought to his office a few days previously to be treated for an obstinate hemorrhage, appearing after the fall of a milk tooth. In this case treatment was begun by plugging the tooth cavity with a tampon of gauze, wet with antidiphtheritic serum. Afterwards a hypodermic injection of 20 cubic centimetres of the same serum was administered. The hemorrhage stopped the same day and had not returned at the time the report was presented. As an offset to this optimistic report, Dr. Mauclaire reported to the same society, March 27, 1907, the case of a bleeder, who required incision of a double parotitis. Anticipating hemorrhage, several cubic centimetres of antidiphtheritic serum were injected the day before the incisions were made; but the opening of the parotid phlegmous caused a frightful hemorrhage, which carried off the patient in a few hours, in spite of the hypodermic injection of gelatinized serum.

Local Treatment of the Puerperal Uterus.—At a meeting of the Obstetrical Society of Paris, March 21, 1907, Dr. Jeannin read a paper on the changes in the bacterial flora of the puerperal uterus as influenced by local treatment. A tampon of sterilized cotton was applied to the puerperal endometrium and afterwards studies were made of the results obtained from the cultivation of the bacteria. The specimens examined were taken before and after curetment. In every case Dr. Jeannin discovered an extraordinarily rich bacterial content, both anaerobic and aerobic; the bacterium coli was always present. In no case had the local treatment employed caused the asepsis of the endometrium, although, in the course of twenty-four or forty-eight

hours the anaerobic bacteria were greatly reduced in number. From his researches Dr. Jeannin concluded that the disinfection of the puerperal endometrium should be much more vigorous than it usually is. He thought that more actitvity should be shown in securing drainage of the uterus instead of tamponning that organ with antiseptic gauze. Tamponade of the puerperal uterus was injurious, he thought, as it causes the retention of microbes in the uterus. He also thought that the obstetrician should do more to obtain efficient general treatment of the puerperal state (collargol, serum, etc.).

Longevity of Canadians.—In the obituary notices of the *Globe,* Toronto, April 15, 1907, nineteen deaths are recorded. One death at 90, one at 84, one at 83, one at 82, one at 76, one at 75, one at 74, one at 66, one at 65, one at 42, one at 40, one at 34. The age at death is given in thirteen instances: in six it is not mentioned. Among the latter, five were deaths of females, two of whom were widows, two married and one unmarried, and one the death of a lad. Worthy of note in these records is the longevity of several of the decedents. The four greatest ages of female decedents aggregate 330 years; the four greatest ages of males 315 years. Another interesting point is that, even in death, the record of a lady's age was not given unless she was over sixty. Is Dr. Osler responsible for this "fine reserve"?

Finsen's Disease.—In a paper read before the Paris Academy of Medicine, March 26, 1907, Dr. Poncet, who had prepared a paper with the assistance of Dr. Leriche, stated that from a close study of the disease of which Finsen died and from the results of the necropsy, they thought that the celebrated inventor had been attacked by inflammatory tuberculosis. That disease, which is specially characterized by periviscerites and by chronic inflammations of the serous membranes, had puzzled Finsen's medical attendants, and even left in doubt the men who had performed the necropsy on his remains.

Athletic Games Involving Loss of Life.—Athletic sport is a fine thing and Canada is justly proud of her athletes. Still play is play; killing is not play. Recently at Cornwall, Ont., a hockey player was charged with manslaughter, because an opponent, whom he had struck on the head during a match, shortly after-

wards died of cerebral hemorrhage. That an assault had been made by the accused was proved at the trial; but the defence proved that the slain man had also received a vicious blow from another opponent: the outcome of the trial was an acquittal. Perhaps the blow given by the accused did not cause the death of the slain man. Perhaps, even if the slain man had worn an iron head piece, his brain would have been injured by the blows he received during the battle—dignified by the name of a hockey match, at which he met his death. One solution of the best method of controlling outbursts of savagery at athletic contests would be as follows: A player at a hockey, lacrosse, football or other athletic match who, during play, deliberately assaults another player with fist, foot or stick, should be dismissed by the referee and not allowed to play during the remainder of the match, a substitute not being allowed to take his place. The public who patronize these games are interested in an athletic performance and not in assault and battery. J. J. C.

PERSONALS.

Dr. Murray McFarlane has left for Europe, where he intends spending three months visiting the special hospitals of London, Paris and Vienna.

We are pleased to announce that our collaborator, Dr. Andrew Eadie, has sufficiently recovered from his recent illness to be able to attend to a little work.

News of the Month.

THE NEW PRESIDENT OF TORONTO UNIVERSITY.

BY DR. QUILL.

Few things can equal in importance the filling of the vacancy that has existed for some time in our Provincial seat of learning. It can easily rival the appointment of a Chief Justice or the granting of a charter to a transcontinental railway. Judges interpret the law to men; the pedagog instructs men to be capable of it, and, although we are doing things in this land by the continent, yet no geographical measurements can suffice for university influences. If Rugby School could be worthy of a Dr. Arnold, what must the man not feel who takes his place as the master-mind of a great and growing family of colleges!

Hail Robert Alexander Falconer!

He is not a native of Ontario or an illustrious graduate of "Old Varsity." Had it been a Henry John Cody, a Charles William Gordon, or best of all, our classical hero—Maurice Hutton—his face would have some of the familiarity that belongs to King Sol. But everything is too big in Canada, to lose one second complaining that the President-elect belongs to the Province of Nova Scotia.

Shade of Sir Daniel Wilson!

We have been informed that the Governors of the University were seeking not for an intellectual mastodon, but for the "right man." Be it unto them according to their faith. In another few thousand years the world may come around to its old way of thinking, and some Plato may be intrusted with an academy. There may be things said to-day on behalf of some who were passed over, although they had every qualification, save that they lacked the "golden touch." Sir Daniel Wilson never looked to us as one with this modern esoteric gift. "Hence, accordingly," the institution was poor. But we believe that we shall think of him during those sacred times when only rare friends will be allowed to enter; think of how he stood before even the unruly convocation, like some statue of the gods, representing faith and truth in a world of chaos and conflict. He was of the spiritual "touch."

No doubt that it took a great deal of nerve to commit the trust to the young theological professor down by the sea. But

those of us who know him and have watched his rapid rise during the past decade do not doubt for one moment that his pulse will beat just as steadily in accepting the responsibility, and will reward the judgment of the Governors by rare success and authority. He will be President Falconer; that is certain, because he can!

Well done, Canada!

If we keep on with our victories we shall soon hold up our heads among the peoples of the earth. Dr. Falconer seems to have fairly won in a good field. Good fortune has always smiled upon him. He has not paid the price of greatness unless it be the sacrifice of that leisure which ordinary men enjoy for "sweet abandon" in good fellowship. This he must regret, as he is every inch a "first-class fellow." He has too good health to suggest that he had ever been an inmate of a mad house where "children read Homer at eight." Unless we are very much mistaken his maxim is rather that of the old Roman—who taught a boy nothing that he could not learn "standing."

To sum up, the new President is "all right." His bearing is quite easy and natural, yet is markedly distinguished. He is not an orator to move the blood, but speaks well and "right to the line." His style is hardly Canadian, lacking our unhappy accent. One would say that he was "well bred." So he is, for he was born in a Presbyterian Manse, where the honor of moderatorship now rests. He has tastes for diplomacy and has won a distinct reputation for shrewdness, tact and power in handling delicate and intricate subjects. Since the time he so impressed the great Scottish professor as to call forth his appreciative query to another Canadian, Have you any more Falconers in Canada? he has made his way fairly into fame and position. Above all this, he is no mean scholar. As a graduate therefore and thus with every interest in our alma mater, we would say—Welcome! Welcome to our President!

QUEEN'S UNIVERSITY, NEW MEDICAL LABORATORY.

Convocation is one of the few occasions in the college year which emphasize the essential unity of spirit and of aim in a great university, and Convocation at Queen's University on April 24th was the first Convocation of that institution when degrees in all the Faculties were conferred at the same time. Grant Hall was filled to overflowing long before the graduates marched in and took their reserved seats. As co-education has long flourished at Queen's, the sweet girl graduates and their friends

formed a fair portion of the interested audience. The never too-respectful gallery advised them to "Hop along Sister Mary," and they hopped along. The graduating class of Queen's this year is exceptionally large. And they made a brave show as they marched in two abreast. Following the graduate body came his Honor the Lieutenant-Governor and Chancellor Sir Sandford Fleming, Principal Gordon and the professional staff, members of the Board and visiting friends of Queen's.

After an invocation prayer by Rev. Dr. Drummond, of Hamilton, the Chancellor called upon Hon. Justice Maclennan, Chairman of the Board, to unveil a brass memorial tablet. This brass contains the following inscription:

"This tablet is placed by order of the Trustees of Queen's University to commemorate the loyalty and liberality of the students who, of their own accord, in November, 1901, undertook to erect at their own cost a new hall in honor of George Munro Grant, who for twenty-five years was the famed and much-beloved Principal of the University, and whose lamented death on May 11th, 1902, gave the noble act of the students the solemnity of a memorial. The corner-stone was laid by the Chancellor of the University, Sir Sandford Fleming, December 6th, 1902, and the hall was formally opened and dedicated on November 9th, 1904."

Then followed the presentation of prizes and scholarships by the Chancellor, assisted by the heads of the Faculties. The conferring of degrees—or in college parlance, the laureation ceremony—took some time, the number of graduates was large, and there were five different degrees given—Master of Arts, Bachelor of Arts, Bachelor of Science, Doctor of Medicine and Bachelor of Divinity.

An unusual feature was the laureation of two blind students, A. T. Barnard, of Hamilton, receiving the M.A. degree, and Rixon Rafter, of Arthur, that of B.A.

The caping ceremony is picturesque. The candidates kneel before the Chancellor, while the hoods are draped over their shoulders and the Chancellor gravely taps each recipient on the head with a mortar-board and recites the stately formula that rewards the student for hard years of patient work and gives him his standing as Bachelor or Doctor or Master. These hoods are even as Joseph's coat of many colors. Some are red as scarlet; some are white as snow; some are canary-color; some are combinations of these, with facings of black or crimson: and the careful carelessness of draping that blazes forth all their possible glory is a trick revealed only to a few people-like Deans and such like. But if you want the real thing in barbaric gorgeousness you should see the Chancellor in his robes and collars and stars of office and the purple magnificence of the Principal—

who makes the glory of all the Cæsars look like a faded flower of year before last.

After the ceremony of laureation Prof. Goodwin presented Professor Willet G. Miller, Provincial Geologist, for the degree of LL.D., honoris causa. Prof. Miller, who was for seven years a professor at Queen's, expressed briefly his appreciation of the honor and his confidence in the future of Queen's, making special reference to the School of Mines.

Principal Gordon delivered the address to the graduates. As might have been expected from a Principal of Queen's, he made an earnest plea for "loyal devotion to truth." This theme he developed with eloquence and power and a fine fervor that revealed the animating spirit of the University, and its makers. He enjoined the graduates to set their faces like flint against falsehood and cowardice in word and deed—he pointed out how with the pursuit of truth mental horizons melt and enlarge forever; that truth cannot contradict truth and that, for a seeming contradiction, the solution is more truth. Finally he made an earnest appeal for their affectionate loyalty to their alma mater and its ideals.

The ceremony of laying the corner-stone of the new medical laboratories followed immediately, on a temporary platform prettily draped with bunting and flags. Principal Gordon made the invocation prayer. Dean Connell followed with an account of the circumstances which led to the erection of the building and the uses to which it was to be put. The Dean then handed the presentation trowel to the Chancellor, who requested his Honor the Lieutenant-Governor to lay the corner-stone. It is not necessary to inquire precisely how much manual labor this ceremony involved, but certainly the trowel and stone and mortar became acquainted. This trowel is an extremely handsome piece of work, executed in Kingston, bearing a short inscription, surmounted by the crests of the Province and the University, the whole surrounded by a wreath of maple leaves.

His Honor's address was brief, but it was marked by a fine regard for learning and a proper understanding of its worth, the debt of the community to Queen's and a strong expression of his personal interest in the truly national work of the University. Over fifty years ago he had been connected with the Royal College of Physicians and Surgeons in Edinburgh, and ever since then he had been deeply interested in the advancement of medicine. He dwelt upon the splendid progress made in the healing art in the last quarter century, though he slyly expressed some doubt as to the physician's real knowledge of the origin, nature and treatment of disease even at this late day. He mentioned the recent improvements in pathology and in materia medica, in bacteriolgy and biology. The remarkable progress

of Queen's, in spite of all difficulties, elicited the Lieutenant-Governor's hearty congratulations. To the Medical Faculty he paid a special tribute, saying that in Old World universities such as Aberdeen and Edinburgh, the Faculties of Medicine are their enduring strength and glory, and that they wield an enormous influence in forming the spirit and *esprit de corps* of the university. He was sure the added facilities in the new building would conduce to the advancement of medical science and the amelioration of human suffering.

In truth, Queen's is an inspiration to the visitor. Because, somehow, Queen's is different. Queen's is not endowed and supported by the Provincial Government like Toronto University, nor the recipient of splendid munificence from men like Lord Strathcona and Sir William Macdonald like McGill. Queen's is a monument to the many. Built up from insignificant beginnings, it is a singularly fine illustration of what energy and perseverance and faith and statesmanlike administration can do, even when every cent of the financial support is raised by individually small subscriptions. Unwearied personal effort by a few and warm and loyal support from the many have made Queen's what it is.

Taking the Scotch universities as a model, a small, a very small beginning was made in 1842. The struggle has been long, painful at times, difficult always. In 1868 the old Government grant was withdrawn, and in 1873 the effort for the first endowment fund was begun and was soon successful. The second endowment campaign, in 1881, resulted in additional accommodation, an increased staff and more students. The third endowment campaign was for the Queen's Jubilee Fund of $250,000, which was also successful. In 1854 the Medical Faculty was established. After years of vicissitudes it gained new vigor in 1891, and from then it prospered. In 1870 co-educational work was begun, and in 1878 the full course was opened to women. The year 1891 also marked the gift of the Carruthers Science Hall and the establishment of a Faculty of Practical Science. Queen's is especially proud of the School of Mines, which has done important work in the present era of mining development in Northern Ontario.

The group of grey stone buildings has a particularly impressive appearance. They are all built of the light grey stone which abounds in Frontenac County, and yet there is nothing grim or forbidding. Rather, the aspect is cheerful and inviting. The style throughout is plain, solid and substantial, yet somehow the plain grey stone buildings, standing four-square to the winds, carry a poise, and, besides, something almost of grace and beauty

easy to discern, hard to define. A Presbyterian might say that the whole scheme typified the genius of the church which has done so much for Queen's.

But while the University of Queen's owes much to the Presbyterian Church, there is nothing limited or limiting in its field of action. There is a fine catholic temper permeating Queen's, which is too broad and too courageous for any creed. This, indeed, is of the very fibre of Queen's—and has been from the days of Snodgrass and Mackerras and Grant, to these days of Gordon and Watson and Schortt and Cappon and Dyde and Depuis. Queen's has never consented to hold a brief for any theorem; for its essential characteristics are independent thinking, freedom of discussion and a singularly consistent pursuit of truth for its own sake. Couple this with a fine, sturdy dignity, the rugged spirit of the Covenanters, and it would seem that you have the spirit of Queen's. It is fair to say that the University has remained true to its early ideals as set forth in its charter: "The education of youth in the principles of the Christian religion and instruction in the various branches of science and literature."

Queen's has done and is doing a magnificent work for Ontario and for Canada. What the State has done for it is as nothing compared with what Queen's has done for the State. Its work is truly national in character, and it is done by private means. Nowhere can be discovered a finer university spirit nor a graduate body more enthusiastically loyal to its alma mater. And this is at least one test of a university. W. E. J.

A PSYCHIATRIC CLINIC.

Ontario is a Province of surprises and occasionally the people are wakened up from their condition of self-satisfaction to find that the world has been making advances while they have been quietly and contentedly resting. This criticism has been applicable to psychiatry, and while it is true that a few restless spirits in the service have chafed under restraints imposed upon them by unsympathetic Governments and have done excellent work in spite of hamperings, the service as a whole has not been satisfactory. From the standpoint of the profession at large this has been particularly true, and there has been little correlation between general medicine and psychiatry. During the last year the waking up of a new spirit in Toronto Asylum has attracted widespread attention, and it was felt that we were on the verge of interesting developments. The vote on Toronto Asylum esti-

mates during last session denotes that a Provincial Secretary keen enough and broad-minded enough to rise to the situation has been found, and Mr. Hanna is to be congratulated on his progressive policy, which stands to put psychiatry in Ontario in the van in America. The intention to build a psychiatric clinic in the neighborhood of the new hospital is an admirable plan, and if it is equipped as it should be we may look for the most gratifying results. As we understand it this clinic is to have 100 beds for the reception of incipient and acute cases of insanity; it is to have extensive laboratories for clinical and pathological investigations, research work, etc. An ample medical and nursing staff will be attached and there will be a close relationship between the University, the new hospital and clinic. In other words, while the clinic is a Government institution, it will be working in harmony with these departments which are not strictly under Government control. All assistants for the Hospital for Insane service will necessarily be trained here. No doubt general practitioners will have opportunity to get in touch with the problems of psychiatry, and the mystery which has always surrounded this branch of medicine will fade away before the searchlights directed from many points of view. The General Hospital will have a new field in which its nurses may derive clinical experience, and medical students will have clinical advantages to be had nowhere else in America. Surely no branch of preventive medicine has greater reason for existence than psychiatry, and it seems to us Mr. Hanna has been well advised when counselled to make this advance. To take such a step must have required a great deal of courage, but the reform is one that commends itself to the profession at large and will redound greatly to the credit of the Government. There has been a feeling abroad that politics have played too prominent a part in institution affairs for many years, and while it is true that too many appointments have been made because of so-called political exigency, this step in advance will clear the way to a better state of things.

DR. DONALD ARMOUR WINS THE JACKSONIAN PRIZE.

Dr. Donald Armour, F.R.C.S., was recently awarded the Jacksonian prize for 1906 by the Royal College of Surgeons, England. In this competition, which is open, special importance is attached to personal observation and original work. It is the first time the prize has gone to a Canadian. Dr. Armour's essay was the "Diagnosis and Treatment of those Diseases and Morbid

Growths of the Vertebral Column, Spinal Cord and Canal, which are Amenable to Surgical Operation."

Dr. Armour, who is a son of the late Hon. Chief Justice Armour, is a graduate in Arts, 1891, and Medicine, 1894, of the University of Toronto. He is a lecturer in the Royal College of Surgeons, England, and is assistant surgeon of Queen's Square Hospital, London. In surgical circles the award won by Dr. Armour is considered a high honor.

ITEMS OF INTEREST.

New University Fraternity.—A chapter of the Alpha Omega Alpha Honorary Medical Fraternity, which is purely medical, and whose motto is "To be worthy to serve the suffering," has been established in the University of Toronto. This is the first chapter in Canada.

What They Say in England.—The Outlook, of London, says in a recent issue: "One could have better spared any educational buildings in the world than the part of McGill University burned down by two successive fires. They were to scientific education what the Hospital for Sick Children in Toronto is to surgery. They were erected by the beneficence of men to whom both Canada and the Empire owe much, and in their equipment the minutiæ of the best schools in America and Europe were studied. Oxford has long been sighing for the opportunity to equip herself with such an instrument of scientific teaching, but we have no such generous patrons in the older countries, and our Government does not take their place. It will take £150,000 or so to repair the loss, and though Montreal is rapidly becoming a city of millionaires, their utmost beneficence will hardly re-create the sentiment belonging to the physics, mining, engineering and chemistry schools lately given by eminent citizens. In this respect the fire—which it is thought was the work of an incendiary—is irreparable."

The Physician's Library.

BOOK REVIEWS.

Diseases of the Nervous System Resulting from Accident and Injury. By P. Bailey, A.M., M.D. New York: D. Appleton & Co.

This book is a revised edition of "Accident and Injury in their Relation to the Nervous System," which was published several years ago. In this edition the scope is much wider, and it is an adequate, if not an exhaustive, text-book upon these special diseases. The subject is broadly treated in all its various phases, the chapters upon brain injuries and general physical and mental results of head injuries being especially exhaustive and helpful.

The author has collected a large number of instructive cases bearing upon the different phases of the subject which add considerably to the value of the book.

We can insure the reader of this book a clear understanding of the subject, and it should prove of value to every physician.

D. C. M.

The Disease of the Nose, Throat and Ear. By Charles Prevost Grayson, A.M., M.D., Clinical Professor of Laryngology in the Medical Department of the University of Pennsylvania; Physician-in-Charge of the Department for Diseases of the Nose and Throat in the Hospital of the University of Pennsylvania; Laryngologist and Otologist to the Philadelphia Hospital. Second Edition, revised and enlarged, illustrated with 152 engravings and 15 plates in colors and monochrome. Philadelphia and New York: Lea Brothers & Co.

The appearance of a second edition in the short time that has elapsed since the first appeared should be gratifying to the author. Grayson endeavors to give lines of treatment which he himself has found best. One sometimes gets a book in which the author has ransacked all literature to gather every and all measures that may be used. This is particularly confusing to the general practitioner and students. Anyone can write a book in which other people's opinions and methods are given, but few are able to write of their own experience. In the former edition but eight pages were given to diseases of accessory cavities of

the nose, and the reviewer remarked adversely on it at the time. Now, however, we find twenty-two pages. The illustrations of the maxillary and frontal sinus operation, taken from Laurens are very plain. The one on page 212, showing both frontal and maxillary trans-illumination in the one cut, with the light in the mouth, might be misleading. The cuts from Laurens showing the mastoid operation are poor. We think further consideration might have been given to lateral sinus thrombosis, and in connection with the diagnosis of a clot too much reliance is given to the aspirating needle. In this connection Whiting alone is quoted, while the views of the English and German aurists are not mentioned. The subject of sinus thrombosis is a very grave topic, and we hope in future editions to see this section much more fully discussed. The book is one in which one cannot help deriving both pleasure and profit in reading, and the publishers, by the excellence of the type and paper, have made this much easier to secure. P. G. G.

The International Medical Annual. A Year-Book of Treatment and Practitioner's Index. Contributors and original contributions to Medical Annual, 1907: Jos. Blumfield, M.D. (Cantab.), "Anæsthesia"; Victor Bonney, M.S., M.D., F.R.C.S., B.Sc., "Gynecology and Obstetrics"; Prof. J. Rose Bradford, D.Sc., M.D., "Renal and Urinary Diseases"; Prof. Alfred H. Carter, M.Sc. (Birm.), M.D., F.R.C.P., "Heart and Blood Vessels"; Frank J. Charteris, M.B., B.C.H., "Materia Medica and Therapeutics"; Chas. C. Easterbrook, M.A., M.D., F.R.C.P. (Edin.), "Insanity"; J. G. Emanuel, B.Sc., M.D., M.R.C.P. (Lond.), "Hematology—Opsonins"; E. Harry Fenwick, F.R.C.S., "Urinary Surgery"; Frederick Gardiner, B.Sc., M.D., F.R.C.S., "Skin Diseases"; Arthur E. Giles, B.Sc., M.D., F.R.C.S., "Gynecology and Obstetrics"; Edw. W. Goodall, M.D., B.S., "Acute Infectious Diseases"; Wilfrid Jas. Hadley, M.D., F.R.C.P., F.R.C.S., "Pulmonary Diseases"; W. Sampson Handly, M.S. (Lond.), F.R.C.S., "Cancer"; Robt. Hutchison, M.D., F.R.C.P., "General Medicine"; Robert Jones, F.R.C.S., "Nerve Anastomosis and Nerve Grafting"; A. Brown Kelly, M.D., B.Sc., "Multiple Telangiectases"; Priestly Leech, M.D., F.R.C.S., "General Surgery"; Jas. Kerr Love, M.D., "Diseases of the Liver"; E. Reginald Morton, M.D., C.M., F.R.C.S., "Radio Activity and Electro-Therapeutics"; George Lane Mullins, M.A., M.D., Sydney, "Australian Diseases"; P. Lockart Mummery, B.C., F.R.C.S., "Rectal Surgery"; Wm. Murrell, M.D., "Colored Urines with Spectra"; Jos. Priestly, B.A., M.D., D.P.H., "Sanitation and Law"; A. W. Mayo Robson, D.Sc.,

F.R.C.S., "Abdominal Surgery"; H. Batty Shaw, M.D., F.R.C.P., "Diseases of the Ductless Glands"; J. Morris Slemons, M.D., Baltimore, "Toxemias of Pregnancy"; J. W. W. Stephens, M.D. (Cantab.), "Tropical Diseases"; Purvis Stewart, M.A. (Edin.), M.D., F.R.C.P., "Nervous Diseases"; Prof. George Fred Still, M.A., M.D., F.R.C.P., "Medical Diseases of Children"; A. Hugh Thompson, M.A., M.D., M.R.C.S., "Eye Diseases"; A. H. Tubby, M.S., M.B., F.R.C.S., "Nerve Transplantation"; J. W. Thompson Walker, M.B. (Edin.), F.R.C.S., "Venereal Diseases"; Norman Walker, M.D., "Skin Diseases"; P. Watson Williams, M.D., M.R.C.S., "Diseases of Nose and Throat"; Prof. J. Whitridge Williams, M.D., Baltimore, "Toxemias of Pregnancy."

In the article on "Deflections of the Septum," written by P. Watson Williams, M.D., no reference is made to an original operation for deflected septum, done at St. Michael's Hospital, Toronto, by Dr. Price Brown. It was noticed in THE CANADIAN JOURNAL OF MEDICINE AND SURGERY, March, 1906, p. 179, and reported at length in *The Journal of Laryngology, Rhinology and Otology*, July, 1906, pp. 309-314.

A slight verbal inaccuracy, showing careless proofreading, changes the name of Dr. W. P. Caven, Toronto, into Dr. W. H. Craven, top of p. 578.

The International Annual of 1907 is a fine collection of papers, showing the advances made during 1906 in the different branches of medical science. J. J. C.

Malarial Prophylaxis in Small Isolated Communities in Central Africa. By R. HOWARD, M.D., B.Ch. (Oxon.), Medical Officer to Universities' Mission, Central Africa.

This little pamphlet contains, perhaps, more reliable and original information on the subject of Malarial Prophylaxis than any other yet published. It is divided into three parts, as follows: Part I.—Preamble; General Historical Survey—The Mosquito Malaria Theory, Observations on Mosquitoes, Methods of Malarial Prophylaxis. Part II.—Nyasaland—Geographical and Historical Data, Report of the Malaria Commission; Malarial Prophylaxis in Outlying Districts—Likoma, Kota Kota, Malindi, Steamers, Results Tested by the Health Record, General Conclusions. Part III.—Relapses—Their Mechanism and Prevention, Quinine Administration; Blackwater Fever.

The following are extracts from the work:

"Since 1899 it has been my privilege to act as Medical Officer to the Universities' Mission to Central Africa. In that capacity I have had charge of a number of Europeans living in typical

outlying stations in the neighborhood of Lake Nyasa, and during this period I have personally made observations and directed anti-malarial measures at all stations, so that my conclusions are based on prolonged study and practical knowledge of the difficulties which have to be encountered."

"One point which is often neglected merits discussion, viz., which salt of quinine it is best to use. Sulphate of quinine was the earliest preparation, and there is a tendency to continue to use it blindly. Its insolubility is a great disadvantage, and so many people have employed the bisulphate instead. The latter, however, has nothing to recommend it except its solubility; on account of the high molecular weight of the two sulphate radicles, it has a very low percentage of quinine, while the amount of dilute sulphuric acid which is introduced into the stomach probably accounts for a good deal of the indigestion attributed to quinine.

"There are other salts that are far more suitable, especially the hydrobromate and the hydrochlorate. They are fairly readily soluble, contain a higher percentage of quinine, and are much less likely to disturb the digestion. The bihydrochlorate is the best salt of all; it has a fairly high percentage of quinine and is soluble in its own weight of water, so that there is probably no risk of even a tablet passing through the body undissolved. Its only disadvantage is, that owing to its solubility, the taste is more noticeable than with other salts.

"All these three salts have been found very satisfactory in the experience of the writer."

The Treatment of Disease. A Manual of Practical Medicine. By Reynold Webb Wilcox, M.A., LL.D., M.D., Professor of Medicine, New York Post-Graduate School and Hospital; Consulting Physician to St. Mark's Hospital; Fellow of the American Academy of Medicine; Member of the American Therapeutic Hospital and of the American Medical Association; Permanent Member of the Medical Society of the State of New York; Honorary Member of the Connecticut State Medical Society; Vice-Chairman of the Revision Committee of the U. S. Pharmacopeia. Philadelphia: P. Blakiston's, Son & Co., 1012 Walnut St. 1907. Canadian Agents, Chandler, Ingram & Bell, Limited, Toronto.

No one will doubt the fact that there is available quite enough medical literature dealing with the practice of surgery, of medicine, and of gynecology and obstetrics. There is, however, somewhat of a dearth of practical books on diagnosis and treatment. That the best medical teaching body on earth does not pay one quarter the attention they should to practical clinical

work and diagnosis is a statement that cannot be contraverted, and it is for that reason that a work similar to the one under review is doubly welcome. Dr. Wilcox's book is withal practical, being the outcome of over a quarter of a century's experience teaching in post-graduate and other institutions. New methods of making correct diagnoses are being suggested every day, so that it is only advisable that works treating of diagnosis should be rewritten and brought up to the mark almost annually. The author has certainly tried to make his book, in every respect, modern. He believes firmly, and wisely, that pathology must form the foundation of the correct diagnosis, and that such being the case, a keen understanding along that line, combined with a "broad knowledge of therapeutics in its larger sense," will almost ensure to the practitioner a successful issue. Dr. Wilcox has written a book that will meet with a ready sale to, especially, those whose one desire is to leave nothing undone that will ensure success.

War With Disease. By Frederick F. McCabe. M.B. (Univ. Dublin), Medical Officer, South of Ireland Imperial Yeomanry; late Civil Surgeon, H. M. Field Force, South Africa. "The great thing in all military service is health, and you will agree with me that it is easier for an officer to keep men healthy than for a physician to cure them."—Lord Nelson, March 11th, 1804. Second Edition. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1907. (All rights reserved.) Canadian agents: J. A. Carveth & Co., Ltd., 434 Yonge Street, Toronto. Price, 50c.

The object of this very practical little work is to show officers and men on active service or in foreign countries how to maintain the best possible health and fitness. How to avoid the various diseases is told in very simple language. It is interesting to note that the writer refers to military orders given by Moses, and shows how these ancient orders are absolutely necessary for the armies of to-day. This book should be in the hands not only of our army surgeons, but of every officer and private in the service, and we feel sure, if the rules here advocated were followed, the death rate from disease would be reduced to a minimum. W. J. W.

Plaster of Paris and How to Use It. By Martin W. Ware, M.D., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor in Surgery, New York Post Graduate Medical School. 12 mo; 72 illustrations; about 100 pages. New York: Surgery Publishing Company, 92 William Street. Cloth. $1.00.

This is one of the most useful books ever presented, not only on account of the general demand for the information and instruc-

tions upon the subject which this book so explicitly, practically and comprehensively covers, but because this knowledge was not previously available, except from such a vast experience as enjoyed by Dr. Ware, or, in part, by reference to many books on allied subjects.

It is a vivid narrative, profusely illustrated, of the many uses to which plaster of Paris is adaptable in surgery. The whole subject, from the making of the bandage to its use as a support in every form of splint, corset or dressing, is graphically described and illustrated. The use of plaster of Paris in dental surgery is also covered. The book is presented in the artistic manner characteristic of the productions of the Surgery Publishing Company. It is printed upon coated book paper and attractively bound in heavy red buckram, stamped in white leaf and gold.

Paraffin in Surgery. A critical and clinical study by Wm. H. Luckett, M.D., Attending Surgeon, Harlem Hospital, Surgeon to the Mount Sinai Hospital Dispensary of New York, and Frank I. Horne, M.D., formerly Assistant Surgeon, Mount Sinai Hospital Dispensary. 12 mo.; 38 illustrations; 118 pages. New York: Surgery Publishing Company, 92 William Street. Cloth, $2.00.

This book covers a special field in surgery of absorbing interest both to the surgeon and general practitioner. The research and original investigations made by these authors in the use of Paraffin have exploded many fallacies previously maintained. It presents the Chemistry of Paraffin, the Early Disposition of Paraffin in the Tissues, Physical State of the Paraffin Bearing on its Disposition, the Ultimate Disposition of Paraffin, Technic and Armamentarium. It thoroughly covers the use of Paraffine in cosmetic work such as Saddle Nose Deformity, Depressed Scars, Hemiatrophia Facialis, with a large number of photographs showing cases before and after operation, with illustrations of micro-photographs of the Disposition of the Paraffin in the Tissues. It also presents other conditions of a functional character, where Paraffin can be used with service, such as Inconsistency of Urine, Umbilical Hernia, Umbilical and Vantral Hernia, Epigastric Hernia, Inguinal Hernia, etc. The subject is presented in a scientific, yet comprehensive manner.

Full details are given as to the method of preparing the Parffin, as well as the method and manner in which it should be injected. This book presents a wide field for the use of Paraffin and a copy should be in every physician's library. It is printed upon heavy coated book paper and attractively bound in the best quality of heavy red cloth, stamped in gold.

A Manual of Obstetrics. By A. F. A. King, M.D., Professor of Obstetrics and Diseases of Women in the Medical Department of the George Washington University, Washington, D.C., and in the Medical Department of the University of Vermont, etc. Tenth edition, enlarged and thoroughly revised. 12 mo; 688 pages, with 30 illustrations and three colored plates. Cloth, $2.75, net. Philadelphia and New York: Lea Brothers & Co. 1907.

King is one of the perennial books. It is now beginning its second quarter-century with its tenth edition and has thus spanned with vigor the most active and exacting period in medical history. No other obstetrical book extant has such a record. Every fact has a reason, and the ever-growing favor bestowed on King can have but one basis, namely merit. The author combines the faculties of a teacher and practitioner, and accordingly has been able to select what is important and to present it clearly. The student thus easily acquires a grasp of everything essential, and the accoucheur can turn to these pages for reference on any point of practice. Suiting both classes of readers this single handy volume receives their combined demand and hence goes through successive editions, enabling the author always to keep it revised to date, as he has just done again, with considerable enlargement both in text and engravings, and with the addition of colored plates.

Publishers' Department

AN IDEAL SPOT FOR CONVALESCING PATIENTS.

How frequently does it occur, especially at this season of the year, that physicians are in a position to refer patients, who are perhaps recovering from illness and are in need of the tonic effect of fresh air, to just such a place as Niagara-on-the-Lake. There is little doubt that whatever the family physician recommends along this line is almost always acted upon, and his advice almost invariably taken as to where the patient will go in order to thoroughly recuperate from his or her illness.

The most important consideration that should attach to any health resort is lofty situation, with pure, dry air, where, if so desired, the patient can sleep under canvas, by that means receiving the tonic and bracing effect of the ozone in the atmosphere both day and night. The busy business man is very frequently unable to get away any great distance from home even to recover his health, he being naturally anxious during his stage of recovery to be within touch of his office and be able to at least give some directions regarding the details as to the conduct of his firm. Toronto is blest peculiarly by having within convenient reach more than one beauty spot whither the patient recovering can be sent for a few weeks time. One of the most picturesque and at the same time convenient spots within easy reach of our city is Niagara-on-the-Lake, the home of the famous Queen's Royal Hotel.

Niagara-on-the-Lake has for many years now been noted as a health resort, being situated at the mouth of the famous Niagara River, less than two hours' sail by steamer from our city. This resort is an exceedingly healthful and at the same time restful place, and any patient referred there can be guaranteed not only quiet by night but by day also. The management are very anxious to bring their hotel under the immediate notice of the medical profession all over Canada, as they feel that physicians are in a position to benefit their patients and themselves and be able almost to guarantee their complete recovery. The rooms of the Queen's Royal are bright and airy. The cuisine has earned for itself quite a notable reputation, all that can be procured from both the Canadian and American markets being served on the table, as the season permits.

In order to convince medical practitioners that the management are anxious to receive their endorsement, they have recently

built, for those desiring more quietude than is usually obtainable in hotel life, several beautiful little cottages in the grounds of the hotel, each fitted with a bath room, hot and cold water, and electric light. These cottages can be rented at very reasonable figures and arrangements made for meals at the hotel at special rates. Physicians may rest assured that any patients referred to the Queen's Royal will not of necessity be confined during their stay to the house, as the management have paid particular attention to providing out-door recreation of almost every kind. The tennis courts are too well known to require more than a mention, they having been used for some years for both the Canadian and International championships.

Golf links have also recently been arranged, so that lovers of this sport will find ready for them a nine hole course immediately adjoining the hotel property. The bowling green in connection with the hotel is known all over the Dominion, having been the scene of many famous matches, not only between Canadian clubs, but those also from accross the Atlantic.

The Queen's Royal has been for years the favorite rendezvous of the Royal Canadian Yacht Club of Toronto and any Saturday during the season it is a beautiful sight to see at anchor the different yachts whose owners come over to spend the Sunday at the Queen's Royal, returning in time for business on Monday morning.

A glance at the cuts illustrating this article will at once persuade the reader that no more attractive spot than the Queen's Royal, Niagara-on-the-Lake, is anywhere within as easy reach of our city, and it may be mentioned that special provision is made by the hotel management for the storing of automobiles for those who prefer motoring to Niagara-on-the-Lake in preference to taking the steamer.

That the Queen's Royal has been patronized for many years by not only society but royalty itself. It may be mentioned that this hotel was honored during the visit a few years ago of their Royal Highnesses the Prince and Princess of Wales, being specially selected by the Canadian Government for the entertainment of the illustrious visitors. No one who has had the pleasure of a visit to this beauty spot will feel that the compliment was not well deserved, Niagara-on-the-Lake having been frequently justly called the "Newport of Canada." "How like the sea," exclaimed the Prince of Wales, as he looked over the broad expanse of Lake Ontario from the deck line piazza of the Queen's Royal, and His Royal Highness was right. Far and away the sun-lit billows tumbled and rolled; the breeze came over the fresh waters of the inland sea, pure and invigorating; sails dotted the horizon, the music of the waves rose on the clear, cool air, and to Great Britain's Sailor Prince there was a charm that nothing else could give.

The Queen's Royal is within a few miles of access by rail, boat or trolley car to Niagara Falls, that nature wonder, situated in the garden of Canada with its wealth of vineyards, orchards and maple clad hills, on the most historic ground in America, where Britisher and Frenchman met again and again in that half-century of conflict "When the world was a battlefield and the prize a continent." Guests of the Queen's Royal can leave every half-hour by trolley and reach Niagara Falls within sixty minutes, viewing all the way what is undoubtedly the most wonderful scenery in the world. The trolley cars run for the entire distance along the Niagara River and the edge of the cliff, so that the traveller is able to view the whirlpool and eddies of that famous body of water. Reaching Niagara Falls, carriages can be procured, so that the guest can drive across Suspension Bridge and visit the American side, or, if so desired, go to the different power houses recently built for the distribution of electric energy all over the province.

The management of the hotel arrange impromptu dances, amateur theatricals, etc., one or two evenings each week during the season, so that the evenings can be spent just as enjoyably as the daytime. The annual military camp takes place for two weeks within walking distance of the hotel, when the scene is enlivened by the presence under canvas in the immediate vicinity of several thousand of our regular militia.

It will, therefore, be seen that medical men cannot make any mistake in referring patients to this beautiful resort on Lake Ontario during the months of June, July and August, as the seeker of rest and quietude cannot but be perfectly pleased with Niagara-on-the-Lake, and return to his work, not only feeling recovered in health and strength, but ready and anxious to make up for what he might erroneously call "lost time."

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